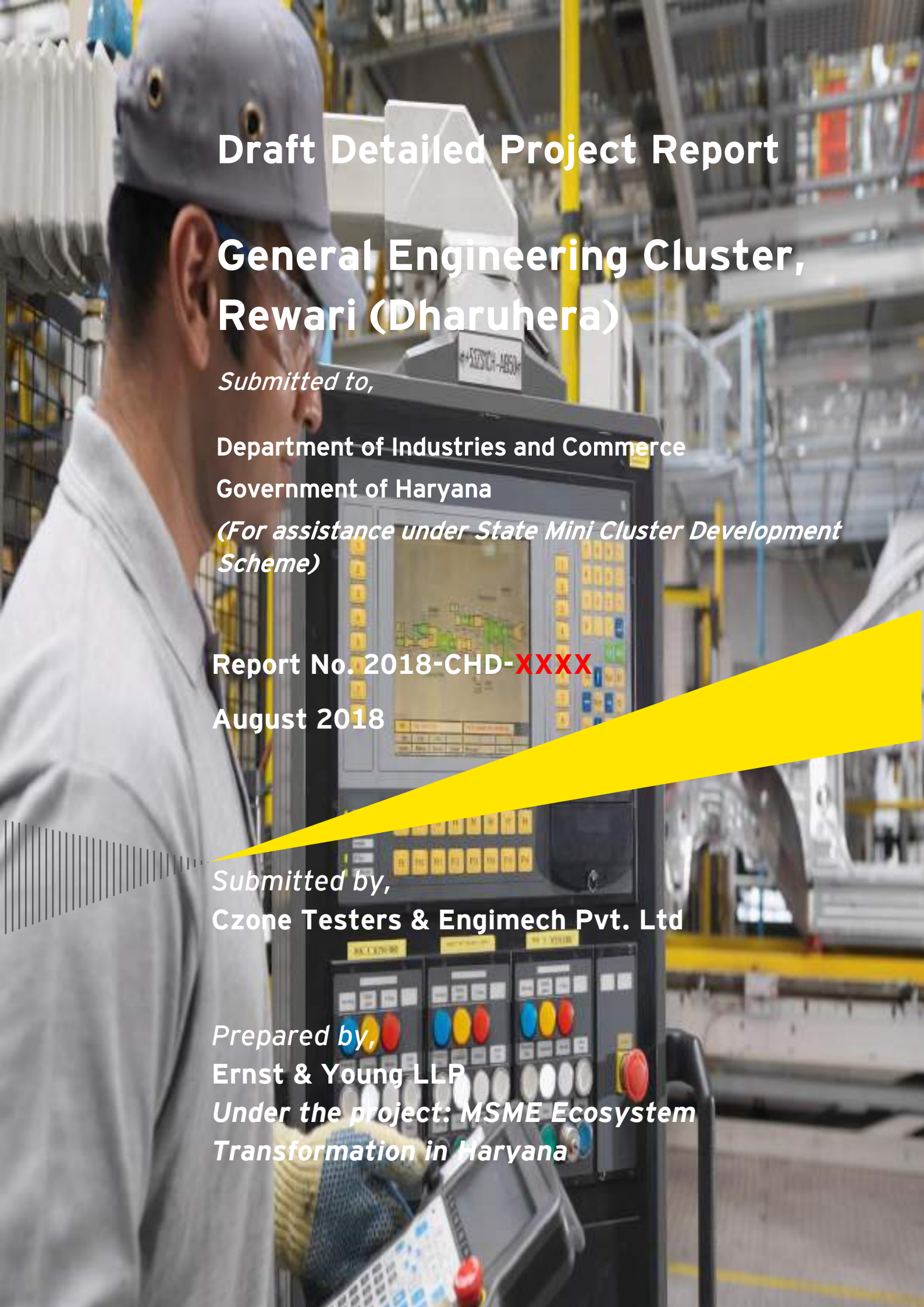

Draft Detailed Project Report

General Engineering Cluster, Rewari (Dharuhera)

Submitted to,

Department of Industries and Commerce

Government of Haryana

(For assistance under State Mini Cluster Development Scheme)

Report No. 2018-CHD-XXXX

August 2018

Submitted by,

Czone Testers & Engimech Pvt. Ltd

Prepared by,

Ernst & Young LLP

Under the project: MSME Ecosystem Transformation in Haryana

5th August 2018

Director
Department of Industries & Commerce,
Government of Haryana
1st Floor, 30 Bays Building,
Sector 17, Chandigarh

Dear Sir/Madam,

As part of our engagement for providing consulting services for 'MSME Ecosystem Transformation in the State of Haryana', we hereby submit the Draft Detailed Project Report (DPR) for setting up of Common Facility Centre in the General Engineering Rewari cluster for your kind perusal. The deliverable has been prepared in accordance with our engagement agreement with Directorate of Industries, Govt. of Haryana dated 03 January 2017, and our procedures were limited to those described in that agreement.

This Detailed Project Report is based on studies of and discussions with:

- Directorate of Industries, Govt. of Haryana
- DIC Rewari
- Engineering related units located in Rewari & Dharuhera
- Industry experts
- Secondary research

Our work has been limited in scope and time and we stress that more detailed procedures may reveal other issues not captured here. The procedures summarized in our Draft Detailed Project Report (DPR) do not constitute an audit, a review or other form of assurance in accordance with any generally accepted auditing, review or other assurance standards, and accordingly we do not express any form of assurance. This Draft Detailed Project Report is intended solely for the information and use of the Office of Director Industries-Haryana and is not intended to be used by anyone other than specified party.

We appreciate the cooperation and assistance provided to us during the preparation of this report. If you have any questions, please contact the undersigned.

Sincerely,

Amar Shankar, Partner – Advisory Services

Disclaimer

This Draft Detailed Project Report for setting up of Hi-Tech Testing Lab & Machining Centre as a common facility centre in the name of - **"Czone Testers and Engimech Pvt. Ltd."** for General Engineering cluster has been prepared by Ernst & Young LLP (hereinafter referred to as 'EY' or 'Ernst & Young' or 'Us') and delivered to the 'Office of Director of Industries & Commerce – Government of Haryana (O/o of DI-HR)' (hereinafter referred to as 'the Client').

The inferences and analyses made by EY in this report are based on information collated through primary research, secondary research, discussions with the client personnel and key stakeholders and our knowledge about the state mini cluster development scheme and its objectives. EY has taken due care to validate the authenticity and correctness of the information from various sources, however, no representations or warranty, expressed or implied, is given by EY or any of its respective partners, officers, employees or agents as to the accuracy or completeness of the information, data or opinions provided to EY by third parties or secondary sources.

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Acknowledgement

We would like to express our sincere gratitude to Department of Industries & Commerce - Haryana and its officials for their involvement and valuable inputs during the preparation of this DPR. We are thankful to **Sh. Devender Singh**, IAS, **Additional Chief Secretary**, Industries & Commerce and **Sh. Ashok Sangwan**, IAS, **Director Industries & Commerce**, Government of Haryana for sharing their insights about the 'Enterprises Promotion Policy 2015' and their vision about the Mini Cluster Scheme. Special thanks to **Sh. R.C Dahra, Consultant (Clusters), Department of Industries and Commerce and Sh. Virender Sanga, Assistant Director, DIC Rewari** for their proactive support and guidance to the team during the entire process.

We would like to convey our sincere thanks to the proactive industry associations in Rewari- **Dharuhera Industrial Manufacturers Association (DIMA)** for their assistance in facilitating stakeholder discussions. Further, we would also like to thank officials of DIC, Rewari for providing support and information related to engineering units in Rewari.

Also, we must extend our sincere thanks to engineering and engineering manufacturing MSME entrepreneurs and other key stakeholders who gave us their valuable time and insights with respect to various dimensions of the industry and its support requirements. Without their help, capturing the industry insights would not have been possible.

Abbreviations

AOA	Articles of Association
AEPC	Engineering Export Promotion Council
ATDC	Engineering Training & Design Centre
BDS	Business Development Services
BEP	Break Even Point
CAGR	Compound Annual Growth Rate
CFC	Common Facility Centre
DIMA	Dharuhera Industrial Manufacturers Association
DIC	District Industries Centre
DSR	Diagnostic Study Report
DPR	Detailed Project Report
EU	European Union
EPP	Enterprise Promotion Policy
GDP	Gross Domestic Product
GSDP	Gross State Domestic Product
HFC	Haryana Financial Corporation
HSIIDC	Haryana State Infrastructure & Industrial Development Corporation
HUDA	Haryana Urban Development Authority
IRR	Internal Rate of Return
MOA	Memorandum of Association
MSME	Micro, Small and Medium Enterprises
MSME-DI	MSME – Development Institute
NCR	National Capital Region
NSIC	National Small Industries Corporation
NABL	National Accreditation Board of Calibration & Testing Laboratory
SBI	State Bank of India
SIDBI	Small Industries Development Bank of India
SWOT	Strength, Weaknesses, Opportunities and Threats
ROCE	Return of Capital Emloyed
UAM	Udyog Aadhar Memorandum
USA	United States of America

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Executive Summary

Executive summary

The Government of Haryana through the Department of Industries and Commerce intends to transform the MSME sector of the state and put it on a growth path. Several incentives have been offered under the state's ambitious 'Enterprise Promotion Policy (EPP) 2015' to provide an impetus to growth of the MSME sector. Towards this, the state aims to strengthen the technology infrastructure as well as enhance productivity and competitiveness of various MSME clusters across the state by availing funding under the State Mini Cluster Development Scheme providing grant under the EPP 2015.

In the above context, this Detailed Project Report (DPR) has been prepared to seek grant-in-aid assistance under the State Mini Cluster Development Scheme to set up Centre for – Hi-Tech Testing Lab & Modern Machining Centre as a Common Facility Centre through an SPV under the name and style of **"Czone Tester and Engimech Pvt. Ltd."** for Rewari General Engineering Cluster.

About the General Engineering Cluster

The engineering sector plays an important role in the development of other industrial sectors of the economy. It is closely linked with the manufacturing and infrastructure sectors. The sector caters to capacity creation requirements in an array of sectors like power, mining, oil & gas, refinery, steel, automotive and consumer durables. Engineering products are largely used as input in the capital goods industry. Hence, the growth and demand of this sector is largely fuelled by the growth and demand of the capital goods industry.

Indian engineering companies enjoy some degree of advantage in some of the engineering sub-sectors vis-à-vis foreign players, in terms of manufacturing costs, market knowledge, technology and creativity. The sector, therefore, attracts immense interest from foreign players. The government has de-licensed the engineering sectors and has allowed 100% Foreign Direct Investment (FDI). Between Apr. 2000 and Dec. 2015, the FDI inflows into India's miscellaneous mechanical and engineering industries stood at around USD 2,993.45 mn.

As per IBEF reports, engineering exports from India stood at USD 65.23 billion in FY17. During FY08–FY17, engineering exports from India registered growth at a CAGR of 7.61%. Engineering exports include transport equipment, capital goods, other machinery/equipment and light engineering products such as castings, forgings and fasteners. In August 2016, engineering exports by India, to its top 25 destinations, registered a growth of 5.8% over August 2015. With the revival of demand for iron and steel in China and the US, India's engineering exports reached USD 58.8 billion in FY16. During the fiscal year 2016-17, the exports have touched USD 65.23 billion, which exceeds the total shipment of USD 58.8 billion in 2015-16.

The general engineering industry in Haryana exhibits strength across the entire value chain from tiny machine parts to heavy machine tools. The cluster based approach to industrial development has produced robust engineering centres such as Gurugram, Faridabad, Rohtak, Rewari, Panchkula, Hisar and Sonipat. Haryana is amongst the front runners of the

industrial development in India that is showcased with its leading position in production of number of industrial/consumer goods i.e. nearly 52% of escalators, 80% of cranes, 50% of passenger cars, 37% of two wheelers, 15% of tractors, 20% of scientific instruments are manufactured in India. One out of every four bicycles in the country is manufactured in Haryana. The state has more than 1,347 big and medium industrial units and 80,000 small scale industrial units[1].

Haryana leads in terms of manufacturing of original equipment and replacement items. Out of about 250 large and medium original equipment manufacturing units in the country, about 50 are located in Haryana.

The cluster units are engaged in the manufacturing of Auto parts, Injection Moulding Machinery parts, two wheeler parts, Sheet Metal Components, Rubber Parts, Plastic products & fabrication work etc. Most of the units manufacture products for other brands, while some also manufacture under their own brands. Several micro and small level entrepreneurs face challenge in getting the die & mould from the faraway places. Due to lack of in-house testing lab & modern machining facilities as common infrastructure and high cost of outsourcing the same.

Diagnostic Study and Interventions

A diagnostic study was undertaken in April 2018 to map the existing business processes in the cluster, identify the gaps, and understand the requirements of the cluster. It was observed that most units required testing of raw material, finised products & machining facilities, as they were currently availing these services from external service providers at high prices and with production delays.This has resulted in a negative impact on their cost competitiveness and a subsequent impact on their market competitiveness. In this context, the units have decided to establish a CFC.

A DSR validation meeting was conducted with SPV and cluster members on **21st May 2018** and was put up to the Director Industries & Commerce for approval. It was approved by the Director Industries & Commerce on **11th June 2018**. The SPV was granted permission to go ahead with the preparation of Detailed Project Report (DPR) for the cluster.

Proposed Common Facility Centre

The proposed CFC will facilitate:

- **Hi-Tech Testing Facility**

The cluster units lack testing facilities for testing the physical and chemical composition of both raw materials as well as finished products. No NABL accredited testing lab is located in the cluster. The lack of physical & chemical testing facilities hampers the growth of the cluster units. For any kind of tests, the entrepreneurs need to go to either Gurgaon, UP, Delhi & Faridabad, which is not only time consuming but also results in higher travel costs. The authenticity of some of these testing labs is also questionable and resulting in higher rejection rates of products. Thus, there is a need to establish an integrated

NABL testing lab within the cluster, which will have two major components viz. Physical testing and chemical testing.

- **Modern Machining Centre for Job Work**

Machining centre is essential for any engineering unit to do job work. The units are using conventional machines and methods for processes which are too old and needs to be upgraded. These machineries are out-dated and cannot match the quality and standard of modern age. The machines are slow and consume time and energy. Presently, the units only have outsourced the job work like wire cutting, making from private players. These private player charge high prices for job work. Also, the units are facing the challenge of measurement of dies and not as per the drawing & specification due to that the final product is frequently rejected by the customers. By establishing this facility under the banner of CFC will provide a much needed technology and infrastructure push to the cluster units and enable them to become more competitive.

Special Purpose Vehicle for Project Implementation

After the diagnostic study, the cluster units came together to form a special purpose vehicle (SPV) by the name and style of **"Czone Testers and Engimech Pvt. Ltd."** as aprivate limited company under section 8 of the Companies Act, 2013 and rule 7 of the Companies (Incorporation) Rules, 2014. DIC, Rewari and MSME-DI Karnal have played an important role in SPV formation by cluster stakeholders. The SPV has been incorporated in 2018, and includes 13 members who are making who are subscribing to the necessary equity base of the company. The proposed CFC will be implemented on public-private partnership basis through the SPV by availing support from Government of Haryana (under EPP 2015).

The SPV members have a track record of cooperative initiatives and are also members of prominent cluster associations. The members have been autonomously undertaking several soft interventions to enhance knowledge and exposure of the cluster units on new trends in the engineering industry and enhancing productivity of their units. This includes exposure visits to fairs and sharing of best practices, registration under UAM, awareness programs on new trends in engineerng manufacturing, entrepreneurship development, energy efficiency, GST etc. These programs were conducted in collaboration with DIC Rewari, MSME-DI Karnal, State Government, DIMA etc.

Project Parameters, Viability and Sustainability

The cluster with support from State Government is planning to set up Common Facility Centre having state-of-the-art testing and modern machining facilities to undertake job work of cluster units with a total project cost of about **INR 250.73 lakhs.** The SPV members have proposed to contribute 25% of the project cost. The total contribution of SPV members will amount to **INR 70.53 lakhs.** Support from State Government is envisaged for **INR 180 lakh.**

The cost of the project and proposed means of finance is tabulated below:

PROJECT COST				
S. No.	**Particulars**	**Total Project Cost**	**Amount as per Guidelines**	**Remarks**
1	**Land & Building** a. Land Value b. Land Development c. Building & Other Civil Works d. Building Value **Sub Total (A)**	 0.00 0.00 0.00 0.00 **0.00**	 0.00 **0.00**	**Eligible (Max 25% of total of L&B, P&M, and Misc. F.A.)**
2	**Plant & Machinery** a. Indigenous b. Imports c. Secondary Machines **Sub Total (B)**	 221.62 0.00 7.17 **228.79**	 200.00 **200.00**	**Eligible**
3	**Miscellaneous fixed assets (C)**	**1.30**	**0.00**	
4	**Preliminary & Preoperative Expenses (D)**	**4.18**	**0.00**	**Not eligible for grant**
5	**Contingency** a. Building @ 2% b. Plant & Machinery @ 5% **Sub Total (E)**	 0.00 11.44 **11.44**	 0.00 0.00 **0.00**	
6	**Margin money for working capital** (Working capital required @ 75% C.U.) **Sub Total (F)**	 4.81 **4.81**	 0.00 **0.00**	
	Grand Total (A+B+C+D+E+F)	**250.53**	**200.00**	

The total project cost is estimated to be **INR 275.85 lakhs**. As indicated above, assistance to the project from the Govt. of India is envisaged to the tune of INR 180 lakhs of the project cost, SPV contribution is to the tune of **INR 77.85** lakhs of the project cost.

S. No.	Source of finance	Total Amount (Rs. In Lakh)
1	Grant-in-aid under State Mini Cluster Development Scheme (Govt. of Haryana)	180.00
2	Contribution of SPV	70.73
	Total	**250.73**

The viability and sustainability of the project is evident from the project economics as well as the cooperative spirit and profile of the SPV. Some indicators of the viability are as follows:

Project's financial indicators

FEASIBILITY		
S. No.	**Particulars**	**Estimates**
1	BEP (cash BEP at initial operating capacity of 75%)	59.5%
2	Av. ROCE (PAT/CE)	28.93%
3	Internal Rate of Return (IRR)	24.69%
4	Net Present Value (at a discount rate of 10 per cent) - incorporating viability gap funding (grant) by GoH	NPV is positive and high (Rs. 184.96 lacs) at a conservative project life of 10 years
5	Payback period	4.58 years with Grant-in-aid assistance from GOH
6	DSCR	Not Applicable (non-availment of term loan in this project)

Asevident from the financials above, with viability gap funding under State Mini Cluster Development Scheme of GoH, the project is highly viable and sustainable. Risk and sensitivity analysis considering a decline in user charge/ capacity utilization also validates the project sustainability.

Project Implementation

Project implementation is envisaged to involve a time-frame of about 7 months upon receipt of final approval of grant-in-aid assistance from the Government of Haryana under State Mini Cluster Development Scheme. The project will be implemented by the SPV in close association with DIC, Rewari and the State government.

In addition, for implementing this CFC project, a Project Management Committee (PMC) comprising of the JD, DIC Rewari and representatives of the SPV, lead bank, and EY experts shall be constituted to directly oversee effective monitoring and implementation. The project will be implemented through the SPV, and the PMC will report progress of implementation to the State Level Steering Committee and DIC, Rewari.

The potential for Rewari General Engineering cluster to grow is enormous, owing to the growing market demand for engineering products in India and globally. The strength of the cluster lies in its location (both geographically & industrially), with engineering industry

which provides the key raw material for engineering products, and its proximity to NCR & Rajasthan which is a key supply hub. Cluster units are unable to effectively cater to the domestic markets as they are lacking price competitiveness and efficiency due to lack of modern machining facilities.

This cluster has the ability to increase its output and market share by manufacturing price competitive products. The proposed facility will be open to all cluster firms to enable them to get job work done in order to cater to the testing & machining requirement. The facility will also provide an opportunity to MSME units to increase their capacity utilization, profitability and major technological push to the units reeling under high competition. The CFC will also enhance the co-operation and joint action among cluster stakeholders to improve their competitiveness to meet the demands of the domestic as well as international markets.

Introduction

1. Introduction

1.1 Overview of the Cluster

There are about **1350** engineering units in Rewari district, Haryana predominately engaged in the manufacturing of auto parts, machinery parts, fabrication parts, moulding machines components, plastic components, die casting, rubber parts, stone crusher parts etc. About **12** of these units have formed a Special Purpose Vehicle (SPV) to set up a Common Facility Centre (CFC) to address common problems of the cluster. The cluster comprises of mainly micro and small units. The annual turnover of the cluster (micro and small units) is about **INR 400 Crore.**

Most of the units manufacture products for tier-I & tier-II suppliers and only a handful are manufacturing directly for Original Equipment Manufacturers (OEMs) other brands. This proposed intervention under the Mini Cluster Development Scheme of Government of Haryana is expected to address the common infrastructure related problems of the cluster.

1.2 Geographic and Economic Traits

The state of Haryana was formed on 01 November 1966. It is situated in the northwest of India with the capital of Chandigarh as a Union Territory. The state is surrounded by Delhi, Rajasthan, & Uttar Pradesh with around 30% of the total area of the state falling under National Capital Region (NCR). The state stands 21st in terms of its area. According to the Census of India 2011, the state is 18th largest by the population. Over the last 5 decades since its formation in 1966, Haryana has transformed and matured into a diversified economy with a thriving secondary and tertiary sector. Although Haryana has an area covering just 1.3 per cent of the country, Haryana contributes nearly 3.63 per cent to India's GSDP. During 2004-16, the state's GSDP grew at a compound annual growth rate (CAGR) of 12.12 per cent.

1.3 Economic Scenario of the State

Haryana is 11th state in the country in terms of GSDP, with growth rate of around 6.5%. With just 1.3% of the total area of the country, Haryana contributes to nearly 3.4% of India's GDP. Haryana, with just 1.37% of the country's geographical area and 1.97% of country's total population, is counted among the first few states with the highest per capita income. The state economy is predominantly agricultural.

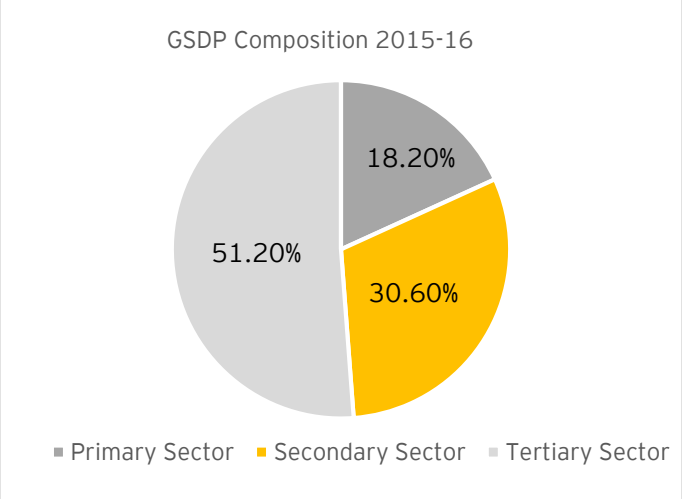

Figure 1: GSDP Composition 2015-16

The industry sector contributes about 18% of the total GSDP of the state. Haryana is fast emerging as one of the most favoured investment destinations in India. The globalization of markets and a resilient

economy have given an incredible drive to the industrial sector in Haryana, which already has a competitive advantage in terms of strategic location, basic infrastructure as well as large skilled, educated and young workforce. Besides, the State has investor-friendly policies and regulatory environment as outlined in its recent EPP 2015. It is one of the leading states in terms of industrial production, especially passenger cars, mobile cranes, two-wheelers & tractors. It is the 2nd largest contributor of food grains to India's central pool, accounts for more than 60% of the export of basmati rice in the country and is 3rd largest exporter of software.

The state is in transition from agrarian to manufacturing sector. The state is gradually transforming from an agrarian economy to an industrial economy. To boost the growth rate further and make Haryana a favourable investment destination, the State has developed the Enterprise Promotion Policy in 2015. With the Enterprise Promotion Policy-2015, the state has envisaged a sustainable industrial spectrum in the state with a special focus on MSMEs in its endeavour for effecting a balanced regional and sustainable development. In order to accelerate the industrial growth in the state, the focus of the government is on holistic development, i.e., by encompassing initiatives for resource efficiency improvement, smarter technology, and environment friendly methods which reduce resource consumption.

1.4 Demographic Trends of Rewari

The capital city of Ahirwal is also the Brass City (Peetal Nagri). It lies in the Southern part of Haryana on the Borders of Rajasthan. It is about 80 km from the National Capital of India i.e. New Delhi and is connected by NH-8 to whole India. Now In this Developing India, Rewari is also having an edge in terms of industrialization. Rewari is now home for many Indian as well as MNC's. Few of them include Hero Motors Ltd. located at Dharuhera, Sony India ltd., Asahi India Safety Glass Ltd. and many more to name.

It is famous for its brass work and also called Brass hub of India. The best of brass work is being done here. The city of Rewari is developing into a modern city day by day. The Railways Junction of Rewari is the main attraction of the City. India's First inland container Depot (ICD) is located at Rewari only.

With the gauge conversion of Rewari – Sadulpur rail line (proposed upto Bikaner) and Rewari-Phulera line Rewari is now among main junctions in India. These railway line have added a glory to the Rewari City.

Rewari is noted for its metal works, particularly brass work. The main markets of Rewari have shops which sell brass utensils and artistic work of brass.

Figure 2 District Map of Rewari

According to the 2011 census Rewari district has a population of 896, 129. This gives it a ranking of 466th in India (out of a total of 640). The district has a population density of 562 inhabitants per square kilometre (1,460/sq. mi). Its population growth rate over the decade

2001-2011 was 17.09%. Rewari has a sex ratio of 905 females for every 1000 males, and a literacy rate of 82.2.

Sector Overview

2. Sector Overview

The engineering sector plays an important role in the development of other industrial sectors of the economy. It is closely linked with the manufacturing and infrastructure sectors. The sector caters to capacity creation requirements in an array of sectors like power, mining, oil & gas, refinery, steel, automotive and consumer durables. Engineering products are largely used as input in the capital goods industry. Hence, the growth and demand of this sector is largely fuelled by the growth and demand of the capital goods industry.

Indian engineering companies enjoy some degree of advantage in some of the engineering sub-sectors vis-à-vis foreign players, in terms of manufacturing costs, market knowledge, technology and creativity. The sector, therefore, attracts immense interest from foreign players. The government has de-licensed the engineering sectors and has allowed 100% Foreign Direct Investment (FDI). Between Apr. 2000 and Dec. 2015, the FDI inflows into India's miscellaneous mechanical and engineering industries stood at around USD 2,993.45 mn.

Engineering is a diverse sector encompassing a number of segments and can be broadly classified into the heavy engineering and light engineering sectors.

2.1 Brief Global Scenario

- **Heavy Engineering**

Heavy engineering usually involves the manufacture of high value goods, using high-end technology. It generally entails huge capital investments and has high entry barriers. The heavy engineering industry comprises of machineries such as mining equipment, cement machinery, textile machinery, machine tools, and material handling equipment, oil field equipment, rubber machinery, metallurgical machinery and dairy equipment. The heavy engineering goods find applications in industries such as power, infrastructure, steel, cement, petrochemicals, oil & gas, refineries, fertilisers, mining, railways, automobiles and textiles, among others.

- **Light Engineering**

The light engineering sector consists of a diverse set of sub-sectors including items such as medical instruments, sophisticated process control equipment, castings, forgings, fasteners, bearings, steel pipes and tubes. These sectors usually use medium to low end technology as compared to high-end technology used in the heavy engineering industry. Relatively lower requirement of capital and technology makes it a low entry barrier sector. The light engineering segment is characterised by small capacities and high level of competition. It is a highly labour intensive sector, and generates ample employment opportunities in the economy.

Some products that form part of the light engineering segment serve as inputs for the heavy engineering and capital goods sectors. Demand for engineering and capital goods;

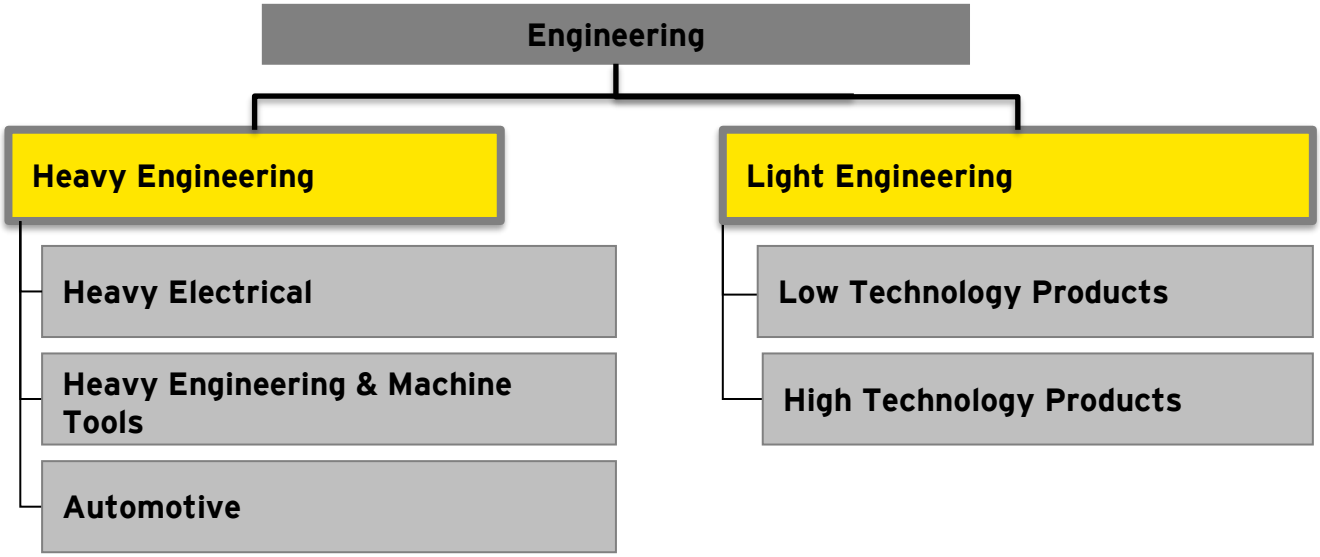

Figure 3: Engineering Sector Product Classification

therefore, influence the overall health of the light engineering sector. Figure 3 presents the engineering sector product classification.

2.2 Brief Indian Scenario

The Indian Engineering sector has witnessed a remarkable growth over the last few years driven by increased investments in infrastructure and industrial production. The engineering sector, being closely associated with the manufacturing and infrastructure sectors, is of strategic importance to India's economy. India's exports of engineering goods have been growing steadily over the last decade, reflecting a double digit growth rate. Exports declined during FY10 as the global financial crisis severely impacted global trade.

While engineering exports recovered during FY11 and FY12, it again contracted during FY13 in tandem with a decline in overall exports. Engineering exports returned to growth in FY14, growing by 8.1% as India's overall exports grew by 4.7% during the year. As per data provided by the Engineering Export Promotion Council of India (EEPC) for FY15, India's export of engineering goods grew by 14.7% in spite of a decline in overall exports. In FY15, India's exports of engineering goods stood at USD 70.7 bn. as compared to USD 61.6 bn in FY14. The sector's share in overall exports stands at around 23%. Figure 4 presents a decadal analysis of India's engineering exports.

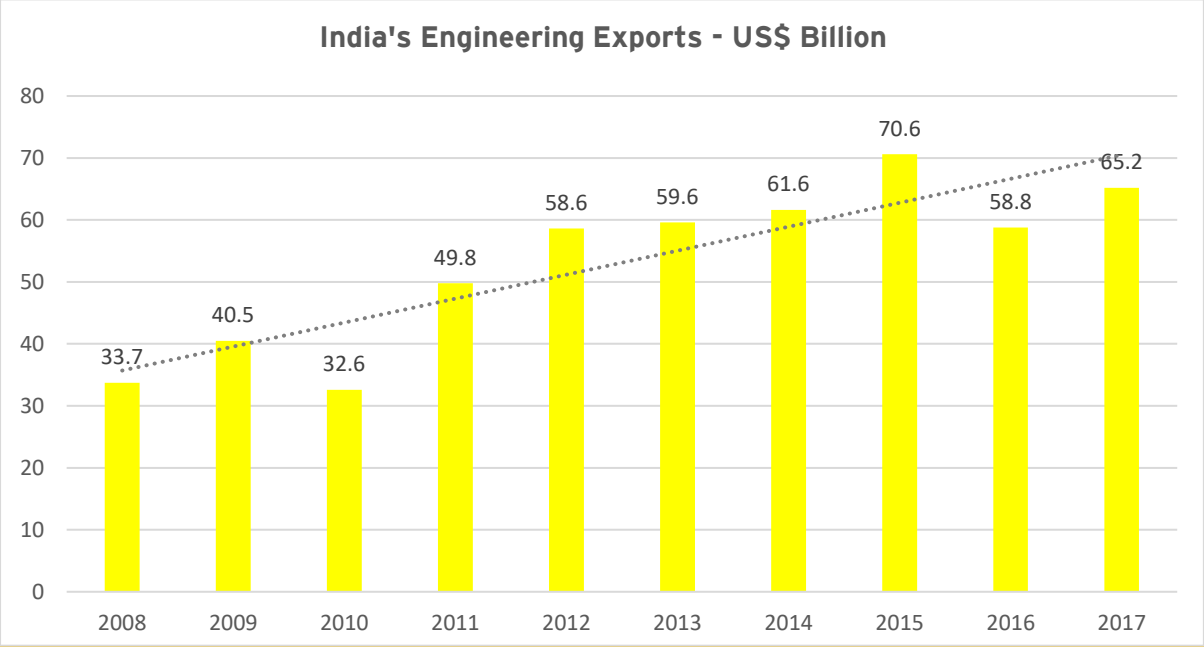

Figure 4: India's Engineering Exports

As per IBEF reports, engineering exports from India stood at USD 65.23 billion in FY17. During FY08–FY17, engineering exports from India registered growth at a CAGR of 7.61%. Engineering exports include transport equipment, capital goods, other machinery/equipment and light engineering products such as castings, forgings and fasteners. In August 2016, engineering exports by India, to its top 25 destinations, registered a growth of 5.8% over August 2015. With the revival of demand for iron and steel in China and the US, India's engineering exports reached USD 58.8 billion in FY16. During the fiscal year 2016-17, the exports have touched USD 65.23 billion, which exceeds the total shipment of USD 58.8 billion in 2015-16.

The engineering industry is an important sector for any state. At the backdrop of a high concentration of automobile makers in Haryana, the industry including auto component sector has been declared as a thrust sector under the Haryana Enterprise Promotion Policy 2015. Maruti Suzuki plants at Gurugram and Manesar, Honda two wheeler plant at Manesar and Hero Motorcorp motorcycle plant at Gurugram/Dharuhera are the anchors which have facilitated the growth in the automobile and automobile components sector and would catalyze future growth too.

The general engineering industry in Haryana exhibits strength across the entire value chain from tiny machine parts to heavy machine tools. The cluster based approach to industrial development has produced robust engineering centres such as Gurugram, Faridabad, Rohtak, Rewari, Panchkula, Hisar and Sonipat. Haryana is amongst the front runners of the industrial development in India that is showcased with its leading position in production of number of industrial/consumer goods i.e. nearly 52% of escalators, 80% of cranes, 50% of passenger cars, 37% of two wheelers, 15% of tractors, 20% of scientific instruments are manufactured in India. One out of every four bicycles in the country is manufactured in

Haryana. The state has more than 1,347 big and medium industrial units and 80,000 small scale industrial units[1].

Haryana leads in terms of manufacturing of original equipment and replacement items. Out of about 250 large and medium original equipment manufacturing units in the country, about 50 are located in Haryana.

Haryana is one of the prominent auto-component manufacturing hub in India with 50% of India's passengers car production, 39% of India's two wheelers production & 11% of India's tractor production. Over the last decade, the automobile sector has grown at a phenomenal rate. Figure 6 provides details of the net value added, gross fixed capital formation, and employment by the automobiles & auto components sector in Haryana as well as the state contribution of the sector to national levels from 2011-12 to 2013-14[2]:

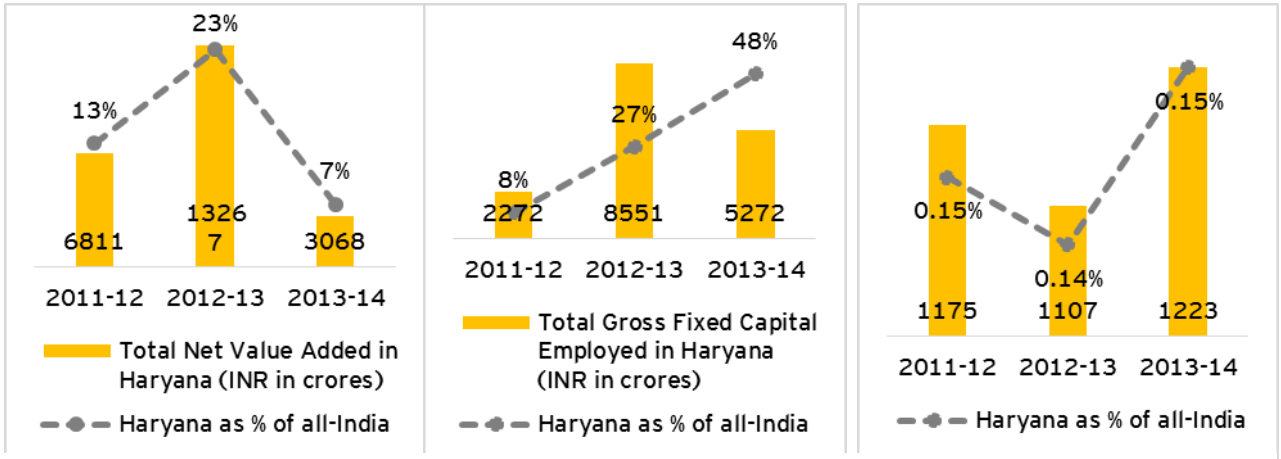

Figure 5: Haryana Economic Scenario

Source: Annual Survey of Industries

Haryana offers a strategic edge to the engineering industry in terms of market access, presence of major OEMs & industrial land to investors. Maruti Suzuki plants at Gurugram & Manesar, Honda Two wheeler Plant at Manesar & Hero MotoCorp's motorcycle Plant at Gurgaon/Dharuhera, Escorts at Faridabad are the anchors, which have facilitated growth in the automobiles & auto components sector. Haryana is the preferred destination for auto & auto components manufacturers with a presence of about 50 are located in Haryana and Gurugram & Faridabad as the important automobile centres & host too many large automotive players. The state has managed to provide the necessary support and capture the entire value chain from production of components to presence of OEMs /assemblers to logistics facilities & to ultimately facilitate retail/exports.

2.3 Products of the Cluster

The cluster products include Auto parts, Tractor parts, two wheeler parts, Agriculture machinery parts, Medical Equipment, Scientific Instrument, Rubber Parts, Plastic products etc. which caters to domestic market only. The units undertake a range of activities such as manufacturing complete product, innovation and value addition, testing and finishing.

[1] EPP 2015
[2] Annual Survey of Industries

A few of the products manufactured by the cluster are presented in figure 6:

Barrel Head

Tractor Parts

Stone Crasher Parts

Screw Barrel

Machinery Part

Engine cover Part

Rubber Parts

Plastic Parts

Plastic Gear

Figure 6: Products of the General Engineering Units

Diagnostic Study Findings

3. Diagnostic Study Findings

A diagnostic study was undertaken by the cluster members in April 2018 to map the existing business processes in the cluster, identify the gaps, and understand the requirements of the cluster. It was observed that many units required modern machining facilities, as they were currently availing these services from external service providers at high prices, and often with production delays. Additionally, external service providers sometimes do not accept the low volume orders from MSMEs.

The DSR was approved by the Director of Industries & Commerce on **11th June 2018** and the SPV was granted permission to go ahead with preparation of Detailed Project Report (DPR) for the cluster. The major findings of the DSR are presented in the following sections.

3.1 Cluster Actors and their role

The primary stakeholders in the cluster are the engineering manufacturing units based in various parts of Haryana. The other stakeholders include the major industry associations, government agencies (mainly DIC, regulatory bodies, raw material suppliers, and academic/training institutes. These cluster actors provide various services to the cluster units. Some of the major cluster actors located in and outside the cluster and catering to the units of the region are mentioned below:

A. Industry Associations

- **Dharuhera Industrial Manufactures Association (DIMA)**

  Incorporated in 2014, DIMA is the association of General Engineering MSMEs in Rewari (Dharuhera) and has been representing problems of small industries and working towards their overall development. Most of the cluster units are the members of this association. The association also undertakes awareness generation of various key topics related to the MSME sector.

B. Government Bodies

- **District Industries Centre (DIC), Rewari**

  DIC is the most important government stakeholder for the cluster. The office of DIC comes under the Dept. Of Industries and is headed by Joint Director who is assisted functional managers and technical field officers. DIC promotes and routes subsidy to micro and small enterprises in the region. The Mini Custer Scheme under which the engineering units want to set up a CFC will also be implemented through the DIC office. The Rewari DIC is actively promoting cluster development in the district and also helps the local units register under Udyog Aadhar Memorandum (UAM). It would play a key role in formulation of the engineering units SPV.

- **MSME-Development Institute, Karnal**

  MSME - Development Institute, Karnal is a field office of the Development Commissioner (MSME), Ministry of MSME, New Delhi, which is an apex body for formulating, coordinating and monitoring the policies and programmes for promotion and development of MSMEs in the country. MSME -DI provides a wide range of extension / support services to the MSMEs.

- **Haryana State Infrastructure & Industrial Development Corporation (HSIIDC)**
  HSIIDC is a major agency in the State to promote the setting up and promotion of small, medium and large scale industrial units. The Corporation also acts as a State-level financial institution and provides long term loans for industrial projects. The important activities of the Corporation are:
  - Development of industrial areas/ estates
  - Helps entrepreneurs on matters such as securing registrations/ licences/ clearances from the statutory/other authorities.
  - Provision of term-loans

- **Haryana Urban Development Authority (HUDA)**

  HUDA is the urban planning agency of the state of Haryana in India. It was established in 1977. It plays a key role in land development and execution of development works like roads, water supply, sewage, and drainage etc. The industrial area of Rewari & Dharuhera maintained by HUDA.

- **National Small Industries Corporation (NSIC)**
  National Small Industries Corporation (NSIC) was established in the year 1955 with a view to promote, aid and foster growth of small industries in the country. Rewari industry is served by the NSIC branch office in Delhi. It provides diverse services to MSMEs in Rewari such as:
  - Helps entrepreneurs in purchasing machinery and equipment
  - Equipment leasing and working capital finance
  - Information on technological up gradation
  - Composite loan scheme and export assistance

C. Educational Institutes

- **National Institute of Engineering & Management (NIEM), Rewari**

The institute was established in the year of 2000. NIEM College is the largest conglomerate of reputed universities in India for distance education. This college serves as a high-tech study centre for Indian Universities in the areas of higher education to provide quality services to the student community. It also organises Institute-Industry interaction which has participation of leading industry and academia.

- **Govt. Polytechnic Lisana, Rewari**

Govt. Polytechnic, Lisana (Rewari) has been set up from the academic session 2006-07 with two courses viz. Diploma in Mechanical Engineering and Diploma in Electronics & Communication Engineering. At present, the institute is running a diploma courses, Civil Engineering, Computer Engineering, Electrical Engineering, Electronics Engineering, Mechanical Engineering, Medical Laboratory Technology. The Institute is approved by All India Council for Technical Education (AICTE), New Delhi, and affiliated to Haryana State Board of Technical Education (HSBTE), Panchkula. Many of the workers engaged by engineering units of rewari have been trained here.

- **Rao Birender Singh State Institute of Engineering and Technology, Rewari**

It is an educational institution that was established in the new millennium year of 2000 to render high quality education. This college serves as a high-tech study centre for Indian Universities in the areas of higher education to provide quality services to the student community. At present, the institute is running graduate courses such as B.Tech & is approved by All India Council for Technical Education (AICTE), New Delhi, and affiliated to Maharshi Dayanand University, Rohtak, and Haryana.

D. Banks / FIs

- **Haryana Financial Corporation (HFC)**
  Haryana Financial Corporation, based in Chandigarh was promoted jointly by the Government of Haryana and the Industrial Development Bank of India (IDBI). HFC has been approved by SEBI as a category-I merchant banker. The corporation's activities include merchant banking, trade finance, lease finance and term lending. The corporation has diversified its range of financial services to include no-fund-based assistance in the form of guarantees, letter of credit and forex services. The DPR for the project shall be appraised by HFC.
- **Small Industries Development Bank of India (SIDBI)**
  SIDBI is the apex financial institution responsible for the growth and development of the MSME sector. Almost all the government subsidy schemes and bilateral lines of credit are implemented through SIDBI. The business strategy of SIDBI is to address the financial and non-financial gaps in MSME eco-system. Financial support to MSMEs is provided by way of (a) Indirect / refinance to banks / Financial Institutions for onward lending to MSMEs and (b) direct finance in the niche areas like risk capital, sustainable finance, receivable financing, service sector financing, etc.
- **Punjab National Bank, Rewari**
  Panjab National Bank is the lead bank of the Rewari district and many local engineering units have a banking relationship with PNB Bank.

E. Leading Manufacturers

Some of the leading teir-1 manufacturers in Rewari include C Zone Engineering Solution, Sharma Industries, Shree Shyam Engineering Works, Devender Glass House & Aluminium, Neelam Glass & Aluminium House, Ashok Engineering, Aaryan Packaging Industries, etc. Key stakeholders of Rewari cluster are presented in figure 8

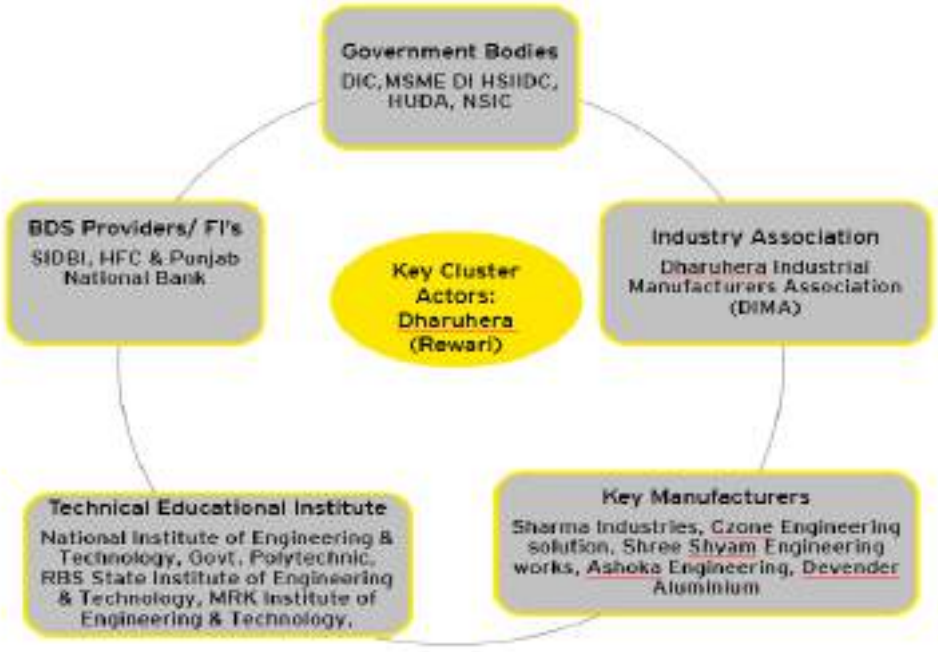

Figure 7: Key Cluster Actors

3.2 Cluster Market, Employment and Turnover

The units in the cluster cater to the domestic market only. Units operate across the spectrum – from completely domestic manufacturing oriented. Manufacturing is predominantly done to order and is usually based on the buyer's given drawings & specifications. MSMEs cater to niche orders from mostly Tier-II, replacement market & only few small scale are catering the demand of OEMs.

This General Engineering industry is capital intensive. Presently, this cluster provides employment to about 8000 people directly & indirectly. On an average, micro units employ approximately 8 persons, and small units in the cluster employ approximately 10-12 persons. The owners of units in the cluster are Graduate, Post Graduates in engineering. The workforce is also technically qualified to a certain extent, having B. Tech/ Diploma/ITI.

The annual turnover of this cluster is estimated to be around INR 400 crores. The average annual turnover of micro and small units is around INR 30 lakhs and INR 200 lakhs respectively. However, there is an enormous potential of increasing the production from cluster units by reducing the outsourcing of activities by units to private players. This would also result in enhanced turnover and open vistas for innovation, which was not possible earlier due to technology constrains. Recommendations around these have been provided in the DSR.

The cumulative annual turnover of the engineering cluster is estimated to be around INR 200 crores. The average annual turnover of micro units is approximately INR 25 lakh, of small units is approximately INR 1 crore, and of medium units varies from INR 5 – 10 crore. However, there is an enormous potential of increasing the production from cluster units by reducing the outsourcing of activities by units to private players. This would also result in

enhanced turnover. At present the private players charged high prices for services such as testing & machining works like boring, die & mould making, which affects the competitiveness of the units.

3.3 Production Process

The units in the cluster are engaged in production of various products. The units in the cluster are engaged in various activities across the value chain of general engineering process. From selection of raw materials, to the finished products, various engineering activities are involved in this process. Following are some common activities generally used for general engineering process.

General engineering Process

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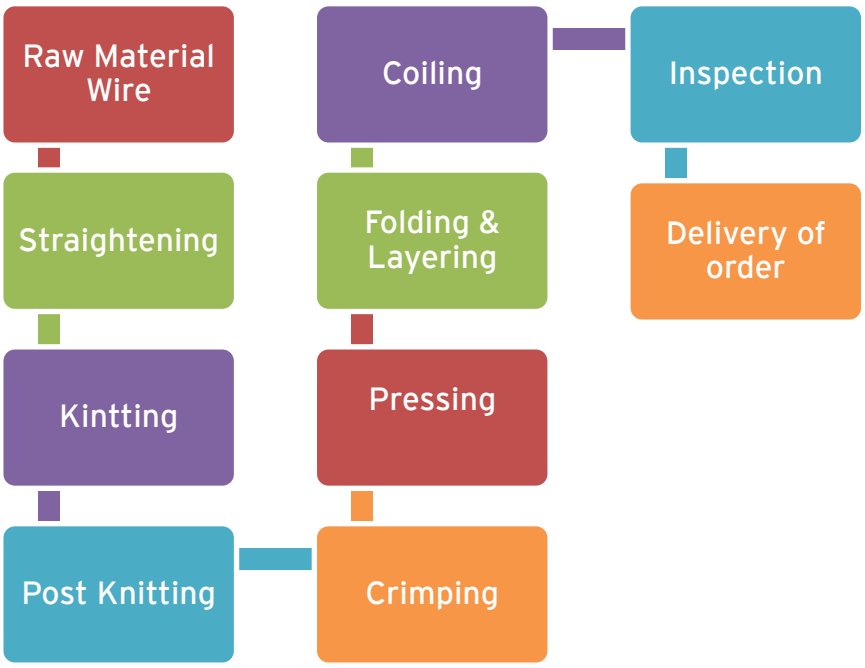

Figure 8: Flow Chart of Production Process for engineering process

- **Wire (Raw Material)** - Welded wire mesh commonly used specifications are the following four: galvanized welded wire mesh; dip welded wire mesh; insulation welded wire mesh; stainless steel welded wire mesh.
- **Straightening-** The basic principle of straightening is the elasto-plastic deformation of the process material. The wire is uncoiled – drawn from the wire coil by wire shift drive. The wire proceeds step by step through the inlet draw, leading and first straightening rolls, straightening unit, compensator of wire length, and cutting – shears to machine metage of desired wire length. Afterwards the wire is cut and is falling to reservoir. Control of wire shift drive and of straightening unit provides for variability of simple parameter adjustment of wire straightening, and that enables wire with various quality, rigidity and surface treatment to be straightened. (non-rigid, firm, spring, rust less wire).
- **KNITTING (Power Loom)** – a spinning technique that uses single wires which are aligned horizontally and vertically thus making 90 degrees' angle with each other.

The longitudinal direction of the mesh is known as warp, and the transverse direction weft.

Either the single strands or the double strands of stainless steel mesh wire are taken per weave depending upon the type of weave pattern to be achieved.

- **Post Knitting:** Once a wire mesh has been knit, it is rare for it to be despatched without the application of a post-knitting procedure. Some of the methods and techniques involved in post-knit processing are:
    - Crimping- A single length of knitted wire mesh is feed between a pair of crimp rollers. As the mesh is crimped it is plastically deformed to a new corrugated profile. By changing the gap between the crimp rollers, and the crimp angle across the rollers, Knit Mesh are able to produce a wide variety of crimped wire mesh profiles.
    - Pressing – Fixed lengths of knitted wire mesh are placed into a die cavity, and the top punch lowered to compress the mesh to a set pressure. Once ejected the mesh component will hold the form of the die cavity. The size, effective density, and permeability of the final product is affected by the wire material and diameter, the type of knitted mesh used, and the maximum pressure in the die.
    - Folding & Layering - folding & layering of knitted mesh is used when 'pads' of material are required, such as in kitchen extraction units or grease filters.
    - Coiling - knitted wire mesh can be coiled for ease of storage, distribution, and application.

- **Inspection**
- **Delivery**

3.4 Value Chain Analysis

Value chain analysis of the most commonly produced cluster products have been conducted to ascertain the major cost areas and identify suitable interventions. The value chain analysis of Barrel Head is provided in table 1:

Table 1: Value Chain Analysis of Barrel[3]

Particulars	Value Added (INR)	Total Value (INR)	% of cost of production
Raw material (EN41P) (Steel Alloy) INR 90/KG	9000	9000	28.13
Machining	6000	15000	18.75
Labour cost	3000	18000	9.38
Electricity Cost	1000	19000	3.13

[3] Source: Stakeholder Consultation inputs

Outsourcing (Nitriding, Grinding, Chroming, Boring)	***6500***	***25500***	***20.31***
Outsourcing Testing Cost (Hardness Test, Vibration & Thermal Test, X-Ray, Metal Testing)	**2000**	***27500***	***6.25***
Finishing	3500	31000	10.94
Freight Charges	1000	32000	3.13
Total Production Cost	32000		100
Profit Margin (6.2%)	2000		
Selling Price	34000		

The value chain analysis has been prepared based on the stakeholder consultation. It can be observed that the raw material (EN41P) (Steel Alloy) amounts to **28%** of total selling price. Another major cost of production is machining cost of the product which is about **18%** of cost of production is attributed to processing cost. Another major area of cost of production is outsourcing for Nitriding, grinding, chroming & boring which is contributed **20%** in total cost production. Testing of raw material & finished product is attributed **6.25%** in total cost of production. The competitiveness of the cluster units can be increased by targeting these major cost areas and providing better facilities to the units. It may be observed that the manufacturing cost will be reduced by around **26%.** Moreover, the competitiveness of the cluster units will be increased manifold in terms of cost inputs, delivery efficiency and the option to innovate.

3.5 Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis

A SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis of the MSME general engineering units in the cluster has been carried out keeping in mind the technology, marketing, product quality, skills, inputs, innovation, business environment and energy/environment compliance of the units. The SWOT analysis is provided in table 2:

Table 2: SOWT Analysis of the Cluster

Area	Current situation		Future	
	Strengths	Weaknesses	Opportunities	Threats
Market	▸ Steady local and international demand for cluster products ▸ Cluster units located in Rewari area, which is well connected ▸ Cluster has proximity to both supply and market ▸ Presence of a large number of buyers in the region ▸ Strong natural business ecosystem in the region with presence of a large number of buying houses.	▸ Presence of other large players to whom bulk orders are made. ▸ Units are unable to market their products directly to OEMs due to inconsistent product quality.	▸ Tapping Domestic open market (retail auto part market) market ▸ Encourage buyer-supplier contacts through fairs, meets, web portal etc. ▸ Export potential in niche markets ▸ Develop common platform for export market through development of IT portals etc.	▸ Intense competition from global markets. ▸ Competition from other major players.
Technology / Product Quality	▸ Ability to manufacture low volumes competitively ▸ Each unit undertakes inspection of products at each stage in their manufacturing process	▸ Lack of access to technologies like Testing and moulding centre. ▸ Low degree of mechanization ▸ No R&D on product development and product quality improvement	▸ Setting up of CFC for advance testing facilities & machining centre for job work, resulting in units being able to obtain these services both timely and at lower costs	▸ Increase in cost of production ▸ Increase in awareness of people on quality certifications shall lead to losing out to business / requirement for more

Area	Current situation		Future	
	Strengths	Weaknesses	Opportunities	Threats
		▸ Lack of relevant machining facility, in-house, results in units having to obtain these from private service providers at higher costs.	and price their products competitively.	stringent testing procedures. ▸ Competition from vendors manufacturing products at lower costs. ▸ Rapid technology obsolescence.
Skill/ Manpower	▸ Skills acquired on-the-job ▸ Presence of technical institutes such as Govt Polytechnic and Industrial Training Institutes.	▸ High labour costs ▸ Lack of interaction between MSMEs and technical institutes for providing technical training	▸ Customized training programs on required skills (operations, soft skills etc.) ▸ Engage technical institutes for skill development programs	▸ Youth interested to work in other lucrative sectors
Innovation	▸ Ability to manufacture products as per the manufacturers specifications ▸ Some units create their own designs (using conventional methods at present) and sell these	▸ Low investment in development of designs ▸ Lack of process automation ▸ Lack of adoption of lean manufacturing clusters such as Six Sigma, Kaizen	▸ Structured processes for information sharing among MSMEs in the cluster	▸ Could lose business to other more price competitive manufacturers from neighbouring states
Business Environment	▸ Rewari is well known as a leading industrial hub of Haryana ▸ Steady growth in domestic demand ▸ Cluster well known as a engineering hub across North India	▸ High cost of industrial land in the cluster ▸ Lack of common infrastructure/CFC facilities ▸ No long term vision of industrialists	▸ Establish CFC with latest technologies for general engineering practices ▸ Create better awareness of government schemes and regulations	▸ Change in policies and regulatory environment ▸ Increase in rate of raw material

Area	Current situation		Future	
	Strengths	Weaknesses	Opportunities	Threats
	► Conducive policy and regulatory initiatives ► Active State Govt. and schemes for development of the sector	► Lack of industrial Association		
Energy/ Environment	► Increased focus on environment due to requirement from buyers	► Lack of knowledge of energy efficiency resulting in higher energy consumption ► High energy cost structure because of lack of efficient processes	► Regular checks on maintaining quality and safety standards ► Potential to reduce energy costs by energy auditing	► Increase in power tariff ► Increased focus on environment standards

3.6 Major Issues / Problem Areas of the Cluster

It can be deciphered from the analysis in the preceding sections, cost competitiveness of MSME units engaged in engineering process in the cluster, is affected by absence of in-house testing facilities, machining facilities & machines like, Video Measurement, Spectrometer Tester, Vibration Analyser, EDM Machine, & Wire-Cut machine. Most of the MSMEs are unable to individually afford such facilities. As per discussion with stakeholders, it is found that, as of now, they are heavily dependent upon private players for some essential operation like testing, machining, who too do not have appropriate modern technologies to perform these operations. Those private players charge exorbitant price for their services. As a result of which, hit and trial method is used to get final product which results in wastage of raw material, money and time which affect their competitiveness in the market.

The key problems cluster related problems identified are:

- **Absence of Testing Lab**: The cluster units lack testing facilities for testing the physical and chemical composition of both raw materials as well as finished products. No NABL accredited testing lab is located in the cluster. The lack of physical & chemical testing facilities hampers the growth of the cluster units. For any kind of tests, the entrepreneurs need to go to either Gurgaon, UP, Delhi & Faridabad, which is not only time consuming but also results in higher travel costs. The authenticity of some of these testing labs is also questionable and resulting in higher rejection rates of products. Thus, there is a need to establish an integrated NABL testing lab within the cluster, which will have two major components viz. Physical testing and chemical testing.

- **Absence of Modern Machinery for job work:** Machining centre is essential for any engineering unit to do job work. The units are using conventional machines and methods for processes which are too old and needs to be upgraded. These machineries are out-dated and cannot match the quality and standard of modern age. The machines are slow and consume time and energy. Due to the absence of EDM, Boring , Wire Cut & VMC machine etc. units are leading delay in production of substandard auto parts, injection moulding machinery components, stone crasher parts, particularly for manufacturing for Tier-II & few for OEMs. This is the major problem of the cluster. Cluster units are depended on private player for the job work.
- **Technology:** Rewari engineering cluster units are dominated by low technology and very rare technological innovation. However, in recent years, the demand of automatic and semi-automatic production systems are rising. This made them to look for modernisation and adaptation of latest machine and technology.
- **Lack of skilled manpower:** Lack of skilled manpower is responsible for wastage of raw material, higher production time, low accuracy and low productivity results.
- **Limited access to markets**: The cluster units are small in size with low production capacity. Individually, they have not been able to garner bulk orders. Moreover, they have been unable to diversify their production capacity to lack of technological

capacities, which has led to limited access to market. In order to increase the production capacity as well as produce new products, units require modern efficient machinery. Lack of capital to purchase these machines has limited the production capacity of these units.

Due to lack of these facilities, the units face higher costs, thereby reducing their competitiveness, especially compared to other competitive areas. This results in loss of market share.

Due to lack of these facilities, the units face higher costs, thereby reducing their competitiveness, especially compared to other countries domestically as well as for export. This results in loss of market share. These facilities, if provided through a CFC in the cluster with government support will help the units become more competitive.

3.7 Equipment used in General Engineering Cluster

The major equipment used in General Engineering Cluster Rewari for manufacturing for manufacturing of engineering products are mentioned in table 3:

Table 3: Equipment used in General Engineering Cluster

Sr. No	Name of the Machine	Application
1	Lathe Machine	The lathe is a machine used principally for shaping metal pieces (and sometimes wood or other material) by causing the work-piece to hold and rotated by the lathe causing the cutting action.
2	Bending Machine	It is forming machine tool It is used to assemble a bend on a work-piece. A bend is manufactured by using a bending tool during a linear or rotating move. The detailed classification can be done with the help of the kinematics.
3	Welding machine	Wilding is a fabrication process that joins materials, usually metals, by causing fusion and is different from lower temperature metal-joining techniques such as brazing and soldering which do not melt base metal is typically added (the weld pool) that cools to form a joint that is usually stronger than the base material.
4	Cutting Machine	This machine is used to cut wire & metals.
5	Moulding Machine	This machine is used for making the mould for sheet metal & plastic products
6	Straightener Machine	This machine is used to straight the wire.

3.8 Technology Gaps Identified in the Cluster

The key technologies that are required in the cluster along with the proposed intervention to be set up under the CFC are mentioned in table 4:

Table 4: Technology Gap Identified

S. No.	Equipment	Technology Gaps Identified	Technology Interventions
1.	**Vibration & Thermal Testing Machine**	▸ Absence of latest technology for testing machine for vibration & thermal testing of products ▸ Units are currently dependent on private service providers, resulting in high costs and production delays ▸ This leads to reduced competitiveness of the units	▸ Acquisition of Vibration & Thermal Testing Machine
2.	**Video Measurement Machine**	▸ Lack of modern technology for proper measurement of products ▸ Units are dependent on private service providers at faraway places, resulting in high costs and production delays ▸ This leads to reduced competitiveness of the units	▸ Acquisition of Video Measurement Machine
3.	**X-Ray Machine**	▸ Absence of high end X-Ray machine for sheet bending ▸ In the absence of this equipment, units have to rely on private service providers ▸ As a result, costs incurred by units rise, resulting in reduced competitiveness	▸ Acquisition of X-Ray Machine
4.	**CNC Vertical Machining Centre**	▸ Absence of CNC Vertical Machining Centre for operational work ▸ Units are currently dependent on private service providers, resulting in high costs and production delays ▸ This leads to reduced competitiveness of the units	▸ Acquisition of CNC Vertical Machining Centre
5.	**Wire-cut Machine**	▸ Absence of Hi-Tech Wire-cut Machine ▸ Units are currently dependent on old machine for wire cut ▸ In the absence of this equipment, units are not able increase their production	▸ Acquisition of Wire-Cut Machine
6.	**Electrical Discharge Machine (EDM)**	▸ Lack of EDM Machine ▸ Units are currently dependent on old machine for drilling & designing ▸ In the absence of this equipment, units are not able increase their production	▸ Acquisition of EDM Machine

3.9 Key technologies missing

The key technologies that are required in the cluster along with the proposed intervention to be set up under the CFC are mentioned in table 5:

Table 5: Proposed Hard Interventions

Rationale for proposed hard interventions under CFC mode	
Critical technology gaps in the cluster	**Proposed technology interventions to enhance cluster's competitiveness through CFC mode**
Advanced Machining Centre for Job Work	
At present, there is no modern machining centre available in region. The cluster units are mostly dependent on the private players on distant locations such Delhi, UP & Rajasthan or machining work. The private player's charges high prices for the job work & frequently rejected at customer ends. These firms also requires dies & mould for job work which are presently outsourced. The other major pain area of the cluster units is absence of repair & maintenance work machinery. Therefore, due the lack of equipment, quality mould, dies & other production aids are procured from far & flung places, which results delays in production & affect their productivity in significant way. In addition, the cluster units are not able to achieve the mass production & growth. Moreover the size of the die & moulds are not as per the drawing & specification. The lack of the machining centre also results in production delays and material wastage.	Machining centre is the backbone of engineering industry. By establishing advanced machining centre the cluster units able to develop the new products in-house & improves the quality of the finished products. By providing the these facilities under the banner of cluster will strengthen the cluster units in following area: ► Good tool design and manufacturing facilities within the cluster & eliminating the need for relying on the private players. ► Obtain the tools economically & easily ► Reduction in cycle time & deliver the finished product faster to the customers ► Enhanced the quality of products ► Increased the quality of products with minimum rejections ► Control the wastages of material This facility will be run on commercial basis in the cluster.
Testing Lab	
The cluster units lack testing facilities for testing the physical and chemical composition of both raw materials as well as finished products. No NABL accredited testing lab is located in the cluster. The lack of physical & chemical testing facilities hampers the growth of the cluster units. For any kind of tests, the entrepreneurs need to go to either Gurgaon, UP, Delhi & Faridabad, which is not only time consuming but also results in higher travel costs. The authenticity of some of these testing labs is also questionable and	By providing the testing lab facility in the cluster, units are to test their raw material & finished products in-house without any delays. Testing and certification of products shall also increase the product credibility in terms of market acceptance. No products accepted in the market without testing. Therefore, this testing facility is boon for the engineering MSME's in the cluster. Also, decrease the additional cost for the MSMEs.

resulting in higher rejection rates of products. Thus, there is a need to establish an integrated NABL testing lab within the cluster, which will have two major components viz. Physical testing and chemical testing.	By establishing the testing lab the units are able to do the following test of their products: • Hardness Test • Vibration & Thermal Test • X-Ray Test • Video Measurement Test • Metal Test The testing lab facility in the cluster shall run on the commercial basis & provide the testing facilities to the cluster units for the range of products. With this facility, cluster units will be able to increase their production & diversify their market.

3.10 Cluster growth potential

The potential for the growth of engineering sector is enormous, owing to the growing market for engineering's in India and internationally. Haryana is a leading auto-components manufacturing state in India. Rewari is located in the proximity of NCR, Faridabad & Rajasthan providing it with a strategic advantage in terms of its proximity to a key supply hub. The NCR region has one of the three largest concentration of automobile manufacturers, the other two being in Pune and Chennai. Most of the output of the cluster is for the auto components, plastic components, injection moulding machine parts, rubber parts, sheet metal components & fabrication work thus proximity to the OEMs is an advantage. Many of the tier-1 suppliers are also based nearby and buy in bulk from the cluster units.

Currently units are facing challenges in cost competitiveness and efficiency due to the absence of advanced machining facility & testing facility. They are obtaining these services from external providers, which is increasing their costs as a result of which the units often get priced out and face loss of orders.

The cluster units will be at benefit in marketing and communication to OEMs when they have the capacity to directly supply hi-quality engineering products in large quantities at reasonable prices. The engineering industry is set to grow at a tremendous pace in the coming years owing to higher disposable income and easy credit availability.

The Haryana government has also undertaken several initiatives to promote industrial development in the region. The state has ensured creation of massive infrastructure in terms of complete electrification, provision of road transport, expansion of administrative, educational and health facilities in small towns, and establishment of many new industrial townships and urban estates.

The Rewari General Engineering cluster has an amazing potential to grow and supply directly to OEMs, if provided with a state-of-the art centre of excellence having testing lab & advance machining facilities under the banner of Common Facility Centre.

Diagnostic Study Recommendations

4 Diagnostic Study Recommendations

Based upon the diagnostic study and intense discussions with various cluster stakeholders regarding gap identification in the cluster, hard interventions (setting up of CFC) are being proposed to enhance the competitiveness of the engineering cluster units.

The cluster has presence of a couple of proactive industries associations which frequently keep organizing awareness and training programs for the engineering industry. The awareness level of the units is found to be satisfactory. While some units are independently conducting training programmes, the others are members of DIMA, which actively conducts trainings and workshops related to entrepreneurship development etc. Several units currently attend domestic engineering exhibitions. Hence, the cluster does not intend to obtain government funding for soft interventions. Details of the initiatives undertaken during the course of the DPR by the cluster, are however, mentioned in the section below.

The recommendations for hard interventions have been elaborated in subsequent sections. The recommendations were finalized in a stakeholder consultation meeting conducted with all the members of the cluster in Rewari (Dharuhera) in May 2018. The recommendations were finalized in the DSR which was approved by the Director Industries & Commerce on **11th June 2018.** The DSR approval letter is attached at ***Annexure-I***. Subsequent discussions for finalizing the technology, financial aspects, user charges/revenue with all the SPV members were held on ***15th July 2017 and 28th July 2018.***

4.1 Soft Interventions for Setting up a CFC

- **Member Meetings:** Cooperation and trust building among members is foremost condition for smooth functioning of the cluster and SPV. Series of meetings and on-site visits were held between the cluster members during the month of June & July 2018 to enhance cooperation among member units and obtain inputs for the DPR. Members of the cluster were informed about the proposed machinery, company registration and identification of building for the CFC. Members of the cluster raised their concerns during the meeting which were resolved by other members of the cluster.

- **Meetings with Vendors:** The members of the cluster have held meetings with multiple vendors for procuring machinery and measurement tools. The members has been actively working with the machinery suppliers to understand the working, specifications and are also attending training sessions for machinery operations.

- **Awareness programmes:** Awareness programmes were organized by the individual units and DIC Rewari. MSME-DI Karnal actively conducts trainings and workshops related to entrepreneurship development, GST, Haryana Govt. schemes, sustainability, etc. and also sponsors members for national trainings. Several units are members of DIMA, and regularly attend these trainings and workshops. They actively share this information with other cluster members.

4.2 Hard Interventions for Setting up a CFC

The cluster would require the following common infrastructure facilities on an urgent basis to improve the competitiveness of the micro and small engineering manufacturing units, and to enable them to move up the value chain. The members of the proposed SPV with support from the state Government are willing to set up a Common Facility Centre with advanced machining facility for job work. This facility shall provide a much needed technical impetus to the cluster units and will enable them to become cost competitive.

The following common infrastructural facilities are being proposed for the CFC, with support from the state industry department. The proposed facility along with its description, usage are detailed below:

4.2.1 Advanced Machining Facility

Vibration & Thermal Testing Machine: Vibration testing is done to introduce a forcing function into a structure, usually with the use of a vibration test shaker or vibration testing machine. These induced vibrations, vibration tests, or shaker tests are used in the laboratory or production floor for a variety of things, including qualifying products during design, meeting standards, regulatory qualifications, fatigue testing, screening products, and evaluating performance.

This machine will be able to test the following in the CFC:

- Vibration and Shock Environmental Test Types
- Multi-shaker Testing
- Vibration Qualification and R&D
- Package Testing
- Earthquake Testing
- Satellite Vibration Testing
- Turbine Blade High Cycle Fatigue Testing
- Environmental Stress Screening test

Video Measurement Testing Machine: is an accepted way of monitoring critical dimensions parts. This equipment ensure that processes are under control and that parts are within specification. It analyse an image of part with accurate dimensions. This machine relying resolution images for the necessary accuracy. It is one of the most useful equipment used in various fields such as material and chemical engineering, etc.

X-Ray Machine: Capable of penetrating solid and liquid substances and providing the internal arrangement of crystalline structure i.e., the arrangement of atoms in the three-dimensional arrangement.

EDM (Electro Discharge Machine: is an electro-thermal non-traditional machining process, where electrical energy is used to generate electrical spark and material removal mainly occurs due to thermal energy of the spark. It is mainly used to machine difficult-to-machine materials and high strength temperature resistant alloys. EDM can be used to machine difficult geometries in small batches or even on job-shop basis. Work material to be machined by EDM has to be electrically conductive.

Wire-Cut Machine: This machine is mainly used to process various punch tie, plastic mould, Powder metallurgy mould and etc, which have 2D and 3D faces combined, or components. It can also cut various sample plate, magnetic steel, Silicon Steel Sheet, semi-conductive material or precious metal. Furthermore, it is able to do tiny machining, abnormal shape groove or machining of standard defect of sample parts, widely used in electrics, precious machine tools, light industry, army industry and so on.

Wire cut EDM: equipment is run by computer numerically controlled (CNC) instruments, which can control the wire on a three-dimensional axis to provide greater flexibility. Whereas conventional EDM cannot always produce tight corners or very intricate patterns, wire EDM's increased precision allows for intricate patterns and cuts. The wire is surrounded by a ring of current, the smallest and most precise cutting path possible is the added diameter of the ring and wire; technicians easily account for this added dimension. Manufacturers continue to produce thinner and thinner wires to allow for smaller kerfs and even finer precision. It can be cut very small pieces, it is often an ideal choice for the production of small, highly detailed items that would normally be too delicate for other machining options.

Spectrometer: This is a testing equipment used for testing the composition of alloying elements.

Boring machine. It is a device for producing smooth and accurate holes in a workpiece by enlarging existing holes with a bore, which may bear a single cutting tip of steel, cemented carbide, or diamond or may be a small grinding wheel. This machine is helpful to achieve greater accuracy of the diameter of a hole, and can be used to cut a tapered hole. At present the cluster units are depended on conventional machines for boring which are not capable enough to provide the higher accuracy and appropriate size. Some of the parts requires higher accuracy & appropriate size which cannot achieve without boring machine. Also, due to low accuracy & inappropriate size the tier-II supplier & open market rejects their products. So, by establishing boring machine cluster units are able to achieve higher accuracy as per the drawing & controlled the wastages of the material.

CNC Vertical Machining Centre: This machine is computer controlled and uses rotary cutters to remove metal from a workpiece. With a vertically oriented spindle, tools stick straight down from the tool holder, and often cut across the top of a workpiece. The machine is operated by a programme to facilitate machining of moulds and dies with intricate shapes, meriting higher accuracy.

Special Purpose Vehicle (SPV) for Project Implementation

5 SPV for Project Implementation

The micro and small units in the Rewari General Engineering Cluster came together to form a Special Purpose Vehicle (SPV) as a private limited company under section 7 of the Companies Act, 2013 and rule 8 of the Companies (Incorporation) Rules, 2014 under the name and style of **"Czone Testers and Engimech Pvt. Ltd."** with **CINU25209HR2018PTC074615**. The SPV was registered on 17th June 2018.The certificate of registration/ incorporation along with Memorandum of Association (MoA) and ***Articles of Association (AoA)*** and PAN card of the SPV are provided in ***Annexure – 2 & 3.*** The Company has an authorized paid up capital of INR 1 lakh which shall be enhanced in the near future. The members are micro and small sized firms (registered units) in Rewari district involved in engineering activities.

DIC, Rewari and State Government both played an important role in SPV formation. The SPV was incorporated in 2018 and already includes 12 members who are subscribing to the necessary equity base of the company. The SPV shall be open for new members to join and for the existing members to leave while maintaining a minimum member base of at least 10 at all times. The proposed CFC will be implemented on public-private partnership basis through an SPV under the name and style of '**Czone Testers and Engimeck Private Limited'** by availing support from Government of Haryana's State Mini Cluster Development Scheme (under Haryana EPP-2015).

The SPV members have a track record of cooperative initiatives. SPV members are also members of prominent cluster associations. Cluster members have been autonomously undertaking several soft interventions to enhance knowledge and exposure of the cluster units on new trends in the engineering industry and enhancing productivity of their units. This includes exposure visits to fairs and sharing of best practices, registration under UAM, awareness programs on new trends in auto components & machinry parts manufacturing, entrepreneurship development, energy efficiency, GST etc.These programs were conducted in collaboration with DIC, the State Government, and ASIMA etc.Therefore, no support (in the form of grant-in aid) will be sought under this project for undertaking soft interventions.

The SPV has conducted a series of stakeholder consultations (with various members, DIC, Rewari, and EY experts) during finalization of project components, selection of technologies and development of Detailed Project Report. The SPV has been instrumental in spreading awareness about cluster development under State Mini Cluster Development Scheme in Rewari and has also helped in validation of DSR. It has kept the State Government and the DIC Rewari engaged during the entire period of development of DSR and DPR.

5.1 Shareholder profile and Shareholding mix

List of Directors: The SPV has two directors. The details of the directors are furnished in Table 6. Other than these directors, the SPV will have provision of having one director each from the State Government. The SPV comprises members from micro and small engineering manufacturing units. It is homogeneous in nature due to similar products and activities performed by the cluster units.

All the 10 SPV members will be shareholders in the '**Czone Testers and Engimeck Private Limited'**. Two members will be the directors in the company. Other than these directors, the SPV will have provision of having one director each from the state DIC and the State Government. The SPV comprises members from micro and small engineering manufacturing units. It is homogeneous in nature due to similar products and activities performed by the cluster units.

Table 6: List of Directors

S. No.	Directors	Name of the unit	Unit address
1	Devender Singh	Devender Glass & Aluminium House	NRP Bass Road, opposite Water Supply, Dharuhera, Rewari
2	Suman Kumari	Czone Engineering Solution	71/12, HUDA industrial area, Dharuhera ,Rewari

The lead promoters/shareholders have several years of successful experience in engineering manufacturing and are also well versed with the benefits of cluster development initiatives. These units are financially viable in nature. Post the DSR validation, the DIC Rewari also acknowledged the genuineness and enthusiasm of the SPV members to undertake project initiatives under State Mini Cluster Development Scheme and has recorded that the CFC demand is authentic. The unit verification details have been added in **Annexure 3.**

Members of the SPV have been engaged in manufacturing of engineering products in Rewari for several years and have considerable experience in marketing and manufacturing of engineering products. Directors and SPV members have had close interactions with technical experts, government institutions and machinery suppliers.

The SPV was formed with the objective of taking up cluster level activity in a joint and coordinated manner, wherein all units have equal say. The shareholding pattern of members of the registered SPV includes the contribution from every member of SPV and no individual shareholder holds more than 10% equity stake in the capital of the company. Details of SPV members along with their contact persons, unit details, UAM numbers and products manufactured are provided in Table7.

Table 7: Details of SPV Members

S .N.	Contact Person	Company/Firms/Units/Proprietor/Name	Contact No.	Address of Unit	UAM No	Products
1	Suman Kumari	Czone Engineering Solution	9812973000	71/12, HUDA industrial area, Dharuhera ,Rewari	HR15B0000793	Plastic product for stone crusher ,Wire mesh conveyer plastic roller plastic seal set
2	Ashwani Sharma	Sharma Industries	9813513521	Jeldar market, Dharuhera	HR15A0000787	Plastic spare parts robotic machines, tie rod, moulding machines parts
3	Sher Singh	Shree Shyam Engg. Works	9416454347	Near Hero company, Dharuhera	HR15A0000790	Plastic products like plastic gears plastic mould ,plastic conveyer wheel
4	Devender Kumar	Devender Glass & Aluminium House	8199988431	NRP Bass Road, opposite Water Supply, Dharuhera, Rewari	HR15A0000783	Plastic frames ,plastic handle ,sliding plastic locking arrangement ,plastic wheel plastic beading and accessories, Glass& aluminium accessories making
5	Krishan Kumar	Neelam Glass &Aluminium House	9896042646	1, Nandrampur Bass Road, Dharuhera, Rewari	HR15A0000780	Door window plastic hardware, plastic wheel ,handle pivots plastic beading accessories
6	Parmod	Prime Contractor & Engineers PVT. LTD.	9812919345	Near Water supply, Dharuhera, Rewari	HR15A0000792	Decorative plastic material, PVC channel for ceiling Modern plastic panel work construction metal work, screw fasteners for shed

7	Dinesh Kumar	NDS Solutions	9991274710	71- A, Industrial Area Dharuhera	HR15A0000794	Plastic moulding accessories beadings & components
8	Manoj Kumar	Shree Glass & Aluminium Works	8901367711	Garhi Bolani Road, Shakti Nagar Rewari	HR15B0000789	Plastic parts, Fabrication, glass doors and frames with plastic (UPVC) beading door windows
9	Pardeep kumar	Jiya glass aluminium & steel work	9896976490	Gol chhakar Delhi gate Rewari Haryana 123401	HR15A0000804	Door window plastic hardware, plastic wheel ,handle pivots plastic beading accessories
10	Pawan Kaushik	ND Print and Pack	7988070533	Chand colony, Bass road , Dharuhera	HR18A0003093	Plastic boxes, & Plastic moulding parts
11	Ashok Kumar	Ashok Engineering	9911407476	Plot No. 234 Sector-6 Manesar	HR05A0006848	Manufacturing of Plastic trolley & plastic products for automobiles
12	Deepak	Aaryan Packaging Industries	9728132314	Plot 102, Sec.-6 IMT	HR05B0006746	Plastic products like RO coil, water purifier parts

5.2 Initiatives undertaken by the SPV

As mentioned in detail in section 4.1, the SPV members have proactively undertaken multiple capacity building initiatives to promote the cooperation among cluster units and enhance knowledge and exposure of the units. The major initiatives are:

- Regular member meetings for discussion on the CFC as well as technologies, marketing, discussion on incentives available to MSMEs, discussion on draft MSME Policy, etc.
- Participation in various programs for capacity building, awareness generation and technological advancement in the cluster.
- Identification of building to be taken on lease for the SPV.
- The preparation of DSR was led by EY consultant and the validation & approval process for the DSR was also led by EY consultant.

5.3 SPV Roles and Responsibilities

The SPV will play a guiding role in the overall management and operations of the CFC. It will provide direction to the management of the CFC and will monitor usage and performance of the CFC. The SPV will constantly report to the state Government about the performance of the CFC. The major roles and responsibilities that are envisaged to be performed by the SPV post the submission of this DPR are mentioned below:

- Coordinating with the state industry department for DPR approvals in the SLSC.
- Accompanying EY experts to various meetings at the state government departments
- Building lease deed agreement in SPVs name.
- Garnering the equity contribution from the members.
- Formation of purchase committees for procurement of goods and services.
- Establishing, operating and maintaining all common facilities as mentioned in the DPR.
- Obtain any statutory approvals/clearances from various government departments.
- Recruit appropriate professionals to ensure smooth execution of the CFC.
- Collection of user charges from members and other users of the facilities as per the decided rates so as to meet the recurring expenses and future expansions of the CFC. While various estimates on user charges / service fee are presented in this DPR, all decisions including usage priority of facilities by members will be made on the basis of decision by members of SPV.
- Preparation and submission of progress reports to state industry department.

The Memorandum and Articles of Association of the cluster SPV indicates the democratic process in terms of decision making on the basis of votes. All members of SPV will meet once every fortnight/month to discuss/resolve operational issues. The management of the CFC will be a two tier structure for smooth and uninterrupted functioning. The executive body i.e. Board of Directors (BoD) will include office bearers elected/nominated from time to time, including one nominee of State Government (DIC).

While various estimates on user charges/service fees are presented in this DPR, all decisions including usage priority of facilities by members will be made by unanimous decision of the members. The CFC will seek direction and guidance from the main governing body, and the

day-to-day administration will be taken care of by the management that shall be appointed by the SPV board of directors. Their role is detailed below:

1. **Board of Directors**: The BoD will be the main governing body and will oversee the operations of the CFC. They will have the decision making power in terms of fixing user fees (for members and non-members) and usage of reserves etc. for future expansion. The Chairman and Managing Director will oversee the entire operations; each Director will be entrusted with specific responsibility like marketing, technical, finance, public relations etc. based on their interests and experience.

2. **Managerial, Technical and Administrative staff**: A competent and well qualified professional with background in engineering industry will be appointed as the Cluster Development Executive (CDE) also referred to as the Cluster Executive Officer, who will look after day-to-day operations of the CFC and shall be directly reporting to the board of directors. The facility will have its own expert staff (supervisors, operations and helpers) as per the requirement. The details of manpower and other requirements are already mentioned in the DPR in the project economics section. There shall be provisions for administrative staff such as accounts personnel, marketing professional, store-keepers etc. to ensure effective functioning of the CFC. The proposed organizational structure of the CFC is given in figure no. 9:

Figure 9: Organisational Structure

Project Economics

6 Project Economics

6.1 Project Cost

The total project cost is estimated at **Rs. 250.73 lakhs**. The project cost for setting up a CFC in the General Engineering cluster includes the following:

1. Building (on lease)
2. Machinery and equipment
3. Miscellaneous fixed assets
4. Preliminary & Pre-operative expenses
5. Contingency
6. Margin money for working capital

The detail of each project component is provided below:

6.1.1 Building

The SPV shall lease one floor of a building on a 10 year irrevocable lease. The SPV has identified the building and obtained a letter establishing the availability of the building. The building is located at Plot No 71/72, Dharuhera Industrial Area, Rewari, Haryana. The available area is 3000 square feet and the monthly rent for the first year would be Rs. 0.45 lakhs, with an annual increase at the market rate (estimated at 10%).

6.1.2 Plant and Machinery

As detailed in section 4.2 (hard interventions), 3 primary machines have been recommended to enable cluster units enhance their competitiveness. The machines have been categorized as primary and secondary. The machines that shall be used primarily for job work have been categorized as primary, whereas, the auxiliary/supporting machines have been categorized as secondary machines. The major facilities proposed at the CFC are for advanced machining center for job work. The total cost of plant and machineries has been estimated at **INR 221.62 lakhs** including taxes and installation fees, and contingency works out to **INR 11.44 lakhs.**

The details of the proposed machinery items are presented in the table below. The detailed specifications and quotations of the machines are provided in the annexure. The SPV has considered quotations for machinery from suppliers based on the manufacturer's reputation, service support, price and quality. However, an open online tendering system shall be followed for procurement of these machines during project execution, and selected vendors will be further invited to negotiate.

Table 8: List of Proposed Plant & Machinery

PLANT & MACHINERY							
S. No.	Machine Name	Quantity	Basic Price	Total Basic Price	GST as Applicable	Total Price	Grand Total
		Indigenous	Indigenous	Indigenous	Indigenous	Indigenous	
A	Primary Machinery						
1	Vibration tester	1	75.00	75.00	13.50	88.50	88.50
2	Video measurement machine	1	17.95	17.95	3.23	21.18	21.18
3	Spectrometer	1	11.50	11.50	2.07	13.57	13.57
4	Wire cut	1	26.46	26.46	4.76	31.22	31.22
5	EDM	1	7.90	7.90	1.42	9.32	9.32
6	Boring machine	1	18.00	18.00	3.24	21.24	21.24
7	VMC	1	31.00	31.00	5.58	36.58	36.58
	Sub Total (A)	**7.00**	**187.81**	**187.81**	**33.81**	**221.62**	**221.62**
B	Secondary Machinery						
1	Compressor CPN10	1	2.80	2.80	0.50	3.30	3.30
2	AC	2	1.64	3.28	0.59	3.87	3.87
	Sub Total (B)	**3.00**	**4.44**	**6.08**	**1.09**	**7.17**	**7.17**
	Grand Total	**10**	**192.25**	**193.89**	**34.90**	**228.79**	**228.79**

6.1.3 Miscellaneous Fixed Assets

The CFC would also require fixed assets such as furniture, fixtures, firefighting equipment, first-aid equipment etc. for smooth running of operations. The total estimated capital expenditure for purchase of miscellaneous fixed assets is estimated to be INR 1.30 Lakhs. Details are provided in the table below.

Table 9: Miscellaneous Fixed Assets

MISCELLANEOUS FIXED ASSETS		
S. No.	Particulars	Amount (INR. Lakh)
1	Misc. Fixed Assets	0.55
2	Furniture (tables & chairs)	0.50
3	Fire Fighting Equipment	0.25
	Total	**1.30**

6.1.4 Preliminary and Pre-operative Expenses

Another major component of the project cost is the preliminary and pre-operative expenses. The preliminary expenses are envisaged as expenses incurred for registration of SPV, legal and administrative expenses, tendering forms, tendering cost, etc.

Pre-operative expenses include expenses for electricity connection charges, refurbishment of the building, administrative establishment, travelling, bank charges, stationery, telephone, and overhead expenses during machinery testing period such as salaries, machine testing cost, bank charges, travelling, etc. The total expenditure for preliminary and pre-operative expenses are estimated at **INR 5.08 Lakhs** (details provided in the table below)

Table 10: Preliminary and Pre-Operative Expenses

PRELIMINARY & PRE OPERATIVE EXPENSES		
S. No.	Particulars	Amount
1	Company/Society/LLP/Partnership Registration Charges	0.50
2	Architect Fee	0.00
3	Tender forms & tendering cost	0.50
4	Project Report Preparation (DSR & DPR)	Nil
5	Project Management Charges	Nil
6	Travelling Cost	0.50
7	Machine testing cost	0.35
8	Cost of Refurbishment, electricity fittings, plumbing	0.00
9	One time electricity connection charges	0.00
10	Lease deed registration charges	1.29
11	Security Deposit (Rent)	0.45
13	Bank Appraisal Charges	0.59
	Total	**4.18**

6.1.5 Provision for Contingencies

As per the guidelines of state-mini cluster development scheme a provision for contingencies has to be made on plant/machinery and building (not applicable in this case as the building is being taken on a lease basis). Contingencies on plant and machinery have been estimated at 5% that amounts to **INR 11.44 lakhs.**

6.1.6 Margin Money for Working Capital

The total working capital requirement during the first year of operation at 75% capacity utilization is estimated at Rs. 14.81 lakh. The working capital loan, if required, will be availed from a local bank and is calculated at Rs. 10 lakh with margin money requirement of Rs. 4.81 Lakh (minimum 30% of working capital requirement as margin). The working capital requirement has been calculated based on requirement of one month of operational expenses and 3 months' debtor collection period. The calculation has been provided in the subsequent section.

6.1.7 Summary Project Cost

A summary of the total estimated project cost as per actual and as per State Mini Cluster Development Scheme is presented in the table below:

Table 11: Total Project Cost

PROJECT COST				
S. No.	**Particulars**	**Total Project Cost**	**Amount as per Guidelines**	**Remarks**
1	**Land & Building**			**Eligible (Max 25% of total of L&B, P&M, and Misc. F.A.)**
	a. Land Value	0.00	0.00	
	b. Land Development	0.00		
	c. Building & Other Civil Works	0.00		
	d. Building Value	0.00		
	Sub Total (A)	**0.00**	**0.00**	
2	**Plant & Machinery**			**Eligible**
	a. Indigenous	221.62	200.00	
	b. Imports	0.00		
	c. Secondary Machines	7.17		
	Sub Total (B)	**228.79**	**200.00**	
3	**Miscellaneous fixed assets (C)**	**1.30**	**0.00**	
4	**Preliminary & Preoperative Expenses (D)**	**4.18**	**0.00**	**Not eligible for grant**
5	**Contingency**			
	a. Building @ 2%	0.00	0.00	

	b. Plant & Machinery @ 5%	11.44	0.00	
	Sub Total (E)	**11.44**	**0.00**	
6	**Margin money for working capital** (Working capital required @ 75% C.U.)	4.81	0.00	
	Sub Total (F)	**4.81**	**0.00**	
	Grand Total (A+B+C+D+E+F)	**250.53**	**200.00**	

6.2 Means of Finance

The project will be financed from two sources: equity from SPV, and grant-in-aid from Govt. of Haryana (under State Mini Cluster Development Scheme, EPP-2015). Working capital loan, if required, will be secured from a local bank. The assistance to the project from Govt. of Haryana under State Mini Cluster Development Scheme is envisaged to the tune of 90% of the project cost for project up to INR 200 lakhs. SPV will be required to contribute 10% of project cost for project cost up to INR 200 lakh. Hence, the SPV members have proposed to contribute the entire amount beyond INR 180 lakhs, taking their overall contribution to about 39% of the total project cost. The total contribution of SPV members will amount to INR 70.53 lakhs. Support from State Government is envisaged for Rs. 180.00 Lakhs. Details of the means of finance are provided in the table below:

Table 12: Means of Finance

Means of Finance		
S. No.	**Source of finance**	**Total Amount (Rs. In Lakh)**
1	Grant-in-aid under State Mini Cluster Development Scheme (Govt. of Haryana)	180.00
2	Contribution of SPV	70.53
	Total	**241.65**

Detailed Means Of Finance							
S. No.	**Source of finance**	**Project cost up to INR 200 lakh**		**Project cost over INR 200 lakh**			**Remarks**
		Percentage Contribution	**Amount (INR in lakh)**	**Percentage Contribution**	**Amount (INR in lakh)**	**Total Amount (INR in lakh)**	
1	Grant-in-aid under State Mini Cluster Development Scheme	90%	180.00	0%	0.00	180.00	As per EPP, 2015 GoH contribution is max 90% (Including

	(Govt. of Haryana)						soft interventio n expenses)
2	Contributio n of SPV	10%	20.00	100%	50.73	70.53	
	Total	**100%**	**200.00**	**100%**	**50.73**	**250.53**	

6.2.1 Share Capital

The contribution of the SPV members will be by way of subscription to shares in the SPV registered as a Private Limited Company. The extent of paid-up share capital would be Rs. 70.53 lakh contributed by the cluster SPV.

The authorized share capital of the company is INR 1.00 lakh at present which shall be increased in due course. The extent of equity subscription by each member will be restricted to a maximum of 10% of total share capital of the company.

6.2.2 Grant-in-Aid

Grant-in-aid of Rs. 180.00 lakh is expected from Government of Haryana. The amount received by the way of grant under State Mini Cluster Development Scheme will only be utilized to procure plant and machinery for the project.

6.3 Expenditure Estimates

In this section, a detailed estimate of expenditure of the CFC has been conducted on eight hour single shift (i.e. 8 hours) operation basis. This has been estimated based upon extensive inputs by the cluster members and the prevalent rates of consumables, utilities and manpower in the cluster. This section considers annual cost of undertaking job work and expenditure estimates. The critical components related to expenditure comprise consumables, manpower, electricity and also expenditure on repair and maintenance of assets, insurance and administrative overheads.

Other elements comprise expenditures by the way of interest toward working capital loans, miscellaneous expenses and non-cash depreciation expenditure.

6.3.1 Consumables

Machines installed at the CFC shall require consumables during operations and completion of the job work. Consumables are critical components of project facilities and may be understood in terms of coolant, grease & cutting tools, etc.

Table 13: Consumables

CONSUMABLES REQUIRED FOR MACHINES											
S. No.	Machine Name	No. Of Machines	Particulars	Total monthly Amt (Rs.)	Consumables required annually (Rs. In Lakh)	Amount (in Rs. Lakh)	Amount (in Rs. Lakh)	Amount (in Rs. Lakh)	Amount (in Rs. Lakh)	Amount (in Rs. Lakh)	Amount (in Rs. Lakh)
						Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
						75%	80%	85%	90%	95%	100%
A.	Secondary Machines										
1	Vibration tester	1	Tool bit, Coolant, Lubricants, Filters etc	5000.00	0.60	0.45	0.48	0.51	0.54	0.57	0.60
2	Video measurement machine	1	Tool bit, Coolant, Lubricants, Filters etc	1000.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00
3	Spectrometer	1	Cutting oil, Hydraulic Oil, Coolant etc	1000.00	0.12	0.27	0.29	0.31	0.32	0.34	0.36
4	Wire cut	1	Cutting oil, Hydraulic Oil, Coolant etc	10000.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00
5	EDM	1	Cutting oil, Hydraulic Oil, Coolant etc	4000.00	0.48	0.16	0.17	0.18	0.19	0.21	0.22
6	Boring machine	1	Cutting oil, Hydraulic Oil, Coolant etc	5000.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00

7	VMC	1	Cutting oil, Hydraulic Oil, Coolant etc	5000.00	0.60	0.10	0.10	0.11	0.12	0.12	0.13
B.	**Secondary Machines**										
1	DG Set	1	Diesel, Lubricants	10000.00	1.20	0.90	0.96	1.02	1.08	1.14	1.20
2	DG set rent	1		5000.00	0.60	0.45	0.48	0.51	0.54	0.57	0.60
	Total				**5.52**	**2.33**	**2.48**	**2.64**	**2.80**	**2.95**	**3.11**
	Consumables per month				**0.46**	**0.19**	**0.21**	**0.22**	**0.23**	**0.25**	**0.26**

6.3.2 Manpower Requirement

Another major expenditure head is the manpower. Facilities installed at CFC will require manpower to function effectively. The total manpower requirement for the project would be about 14 persons. The manpower required under project has been divided under two categories: Direct & Indirect. Direct manpower is required for operation of machines while indirect manpower is required for administrative purposes. The annual expenditure on salary component for direct manpower is estimated at INR 35.84 lakh and for indirect at INR 6.60 lakhs. The total expense on manpower is projected at INR 2.79 lakh per month or INR 42.44 lakh per annum.

The details of monthly and yearly expenses for manpower required for running the project is provided in table below:

Table 14: Expenditure related to Salary (direct manpower - machine operators and helpers)

MANPOWER REQUIREMENT				
Category	No. of Manpower Required	Salary per month per person (INR)	Total Salary Per Month (INR)	Total salary & wages per Year (INR lakh)
DIRECT MANPOWER				
Vibration tester operator	1	25,000.00	25,000.00	3.00
VMM operator	1	25,000.00	25,000.00	3.00
Operator Spectrometer	1	27,000.00	27,000.00	3.24
VMC+Borning+wire cut + EDM + programmer	5	30,000.00	1,50,000.00	18.00
Helper	3	9,000.00	27,000.00	3.24
Office Boy	1	8,500.00	8,500.00	1.02
Security Guard	1	9,000.00	9,000.00	1.08
	13	**133500**	**271500**	**32.58**
Add: Perquisites/Fringe Benefits @ 10%				**3.26**
Sub Total (A)				**35.84**

Table 15: Expenditure Related to Salary (indirect manpower – administrative and support staff)

INDIRECT MANPOWER				
Category	No. of Manpower Required	Salary per month per person (INR)	Total Salary Per Month (INR)	Total salary & wages per Year (INR lakh)
Cluster Development Executive (CDE)	1	30,000.00	30,000.00	3.60
Accountant	1	20,000.00	20,000.00	2.40
	2	**50,000.00**	**50,000.00**	**6.00**
Add: Perquisites/Fringe Benefits @ 10%				**0.60**
Sub-Total (B)				**6.60**

6.3.3 Utilities

The most important utilities required in the project is power supply. Proposed CFC requires power for operation of machinery as well as other supporting equipment for smooth operations. The total connected load requirement has been estimated at 70.40 kW. The table below depicts the machine and equipment wise power requirement in the CFC. The drawn power is conservatively assumed at 60% of the connected load in the case of operating facilities and shop floor.

Table 16: Machine & Equipment (facility) wise power requirement

UTILITIES			
S. No.	**Machine & Equipment**	**Power Requirement (kW)/ Connected Load**	**Total power requirement (60% of drawn power) kWh**
1	Vibration Tester	15.00	9.00
2	Video measurement machine	2.00	1.20
3	Spectrometer	2.00	1.20
4	Wire cut	15.00	9.00
5	EDM	5.00	3.00
6	Boring machine	10.0	6.00
7	VMC	15.0	9.00
	Total Connected load for CFC	**64.0**	**38.4**
	Buffer Connected Load (10% of Total Connected Load)	**6.40**	
	Total	**70.40**	

The power requirement for operation of core machinery and equipment and administrative facilities is 70.40 kW. The facility is heavily based on electricity for operations and will also require additional 10% connected load as a buffer to get the electricity connection. The total connected load for the CFC is estimated to be 70.40 kW.

Fixed charges for connection of 70.40 kW @ Rs. 710 per kW equals Rs. 11968/- per month and monthly consumption charge @ Rs. 8 per unit for 7680 units amounts to Rs. 61, 640/- per month. This has been calculated based on the prevalent rates of the power provider.

The table below presents the envisaged annual expenditure in terms of power related charges.

Table 17: Annual Expenditure Statement vis-à-vis Power Charges

Power charges at various C.U.										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	75%	80%	85%	90%	95%	100%	100%	100%	100%	100%
Fixed	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44
Variable	5.53	5.90	6.27	6.64	7.00	7.37	7.37	7.37	7.37	7.37
Total	6.97	7.33	7.70	8.07	8.44	8.81	8.81	8.81	8.81	8.81

Permonth	0.58	0.61	0.64	0.67	0.70	0.73	0.73	0.73	0.73	0.73

6.3.4 Annual Repairs and Maintenance Expenses

The annual repairs and maintenance expenses have been estimated to be Rs. 6.96 lakh. The details are presented in the table below:

Table 18: Annual Repairs and Maintenance Expenditure

REPAIR & MAINTENANCE	
ANNUAL REPAIR AND MAINTENANCE EXPENSES	
Repair & Maintenance of Building	0.10
Repair & Maintenance of Plant and Machineries @ 3%	6.86
Total	**6.96**

Insurance and miscellaneous Administrative Expenses

Insurance is a critical component of asset protection at the CFC. Insurance is computed on the basis of 0.5 percent on the fixed assets. Cost of insurance shall remain as a fixed cost. Miscellaneous administrative expenses are estimated at a lump-sum of Rs. 2.20 lakh per year. The details are presented in the table below:

Table 19: Insurance and Miscellaneous Administrative Expenses

OTHER EXPENSES	
Insurance Charges (Estimate @ 0.5% on fixed assets (such as buildings, civil works, and Plant & machinery, including related contingency expenses of approx. Rs. 10.92 Lakh)	1.20
Miscellaneous Expenses (Stationery, communication, travelling, and other misc. overheads)	1.00
Total	**2.20**

6.4 Working Capital Requirements

Working capital has been calculated in terms of one month's operating expenses required for the CFC as well as three months' debtor collection period. The operating expenses includes in form of consumables, salaries, utilities and rent expenses.

The working capital requirement of the project for the one month of operation has been considered for consumables and expenses. The SPV will contribute the margin money for working capital and rest of working capital will be borrowed from local bank. While calculating the project cost, a minimum of 30% of working capital is shown as margin for working capital and the remaining will be borne by SPV as borrowings. The total working capital is estimated to be INR 14.81 lakh during the first year of operation (75% C.U.).

Further, total working capital required at an operating capacity of 80% during the second year comes out to INR 15.77 lakh. The corresponding margin money for working capital requirement at 75% & 80% capacity utilization in the first 2 years amounts to INR 4.81 lakh and INR 5.77 lakh respectively, and the corresponding loan amounts to Rs. 10 lakh.

The details are presented in the table below:

Table 20: Working Capital Requirements

WORKING CAPITAL											
S. No.	Particulars	Period	As per Capacity Utilisation								
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
			75%	80%	85%	90%	95%	100%	100%	100%	100%	100%
1	Consumables	1 month	0.19	0.21	0.22	0.23	0.25	0.26	0.26	0.26	0.26	0.26
2	Utilities (Power)	1 month	0.58	0.61	0.64	0.67	0.70	0.73	0.73	0.73	0.73	0.73
3	Working Expenses (Manpower)	1 month	2.79	2.94	3.09	3.24	3.39	3.54	3.54	3.54	3.54	3.54
4	Rent	1 month	0.45	0.50	0.54	0.60	0.66	0.72	0.80	0.88	0.96	1.06
5	Sundry Debtors (Sales Value)	3 month	10.80	11.52	12.24	12.96	13.68	14.40	14.40	14.40	14.40	14.40
6	Working capital (Total expenses)		14.81	15.77	16.73	17.70	18.68	19.65	19.73	19.81	19.89	19.99
7	Working Capital Margin		4.81	5.77	6.73	7.70	8.68	9.65	9.73	9.81	9.89	9.99
8	Working Capital Loan		10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
9	Interest on Working capital loan @11% p.a.		1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
10	Working Cap Margin %age		32%	37%	40%	44%	46%	49%	49%	50%	50%	50%

6.5 Depreciation Estimates

Estimates of depreciation are non-cash expenditure and presented in this section on the basis of Written down Value (WDV) methods. Accounting for depreciation would facilitate sustainability of operations in terms of developing a fund for replacement of assets. The relevant fund that is accumulated could facilitate the replacement of such assets toward the end of the envisaged asset life of 10 years. Depreciation of plant and machinery is considered at 15% a year (envisaged project life of 10 years prior to replacement of assets), depreciation of computers is considered at 60% per year, depreciation of furniture at 10% per year, and depreciation of miscellaneous fixed assets at the rate of 15% a year. The computation of depreciation as per WDV method is provided in the tables below.

Table 21: Depreciation based on WDV

DEPRECIATION (WRITTEN DOWN VALUE METHOD)										
Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Land										
Opening Balance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Less : Depreciation	-	-	-	-	-	-	-	-	-	-
Closing Balance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building and Civil work										
Opening Balance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Less: Depreciation @ 10%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Closing Balance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Plant & Machinery										
Opening Balance	240.23	204.20	173.57	147.53	125.40	106.59	90.60	77.01	65.46	55.64
Less: Depreciation @ 15%	36.03	30.63	26.03	22.13	18.81	15.99	13.59	11.55	9.82	8.35

Closing Balance	204.20	173.57	147.53	125.40	106.59	90.60	77.01	65.46	55.64	47.30
Computers										
Opening Balance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Less: Depreciation @ 60%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Closing Balance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Furniture										
Opening Balance	0.50	0.45	0.41	0.36	0.33	0.30	0.27	0.24	0.22	0.19
Less: Depreciation @ 10%	0.05	0.05	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.02
Closing Balance	0.45	0.41	0.36	0.33	0.30	0.27	0.24	0.22	0.19	0.17
Other Misc. Fixed Assets										
Opening Balance	0.80	0.68	0.61	0.55	0.50	0.45	0.40	0.36	0.33	0.29
Less: Depreciation @ 15%	0.12	0.07	0.06	0.06	0.05	0.04	0.04	0.04	0.03	0.03
Closing Balance	0.68	0.61	0.55	0.50	0.45	0.40	0.36	0.33	0.29	0.26
Total Depreciation	**36.20**	**30.74**	**26.14**	**22.22**	**18.89**	**16.06**	**13.66**	**11.61**	**9.87**	**8.39**
Depreciated value	**205.33**	**174.58**	**148.45**	**126.23**	**107.33**	**91.27**	**77.61**	**66.00**	**56.13**	**47.73**

6.6 Income/Revenue estimates

The CFC is expected to generate revenue by way of user charges that shall be levied based upon the number of meters of cloth printed as well as number of tests conducted. The user charges shall vary based upon the user i.e- the SPV members and non SPV members. The user charges will be less for the SPV members as compared to non SPV members. Firms based outside Rewari shall be charged a premium for availing the CFC services. The major income sources for the CFC are envisaged by the way of providing advance machining & moulding facilities.

The user charges have been estimated based upon the operational expenses of the CFC and the prevalent market rates in Rewari. User charges for secondary machines have not been considered as a part of revenue. Estimation of user charges for availing services at CFC has been done on a conservative basis. An average user charge has been used, taking into account the demand for basic and specialized machining facilities.

The relevance and appropriateness of user charges is also evident from the fact that the rates fixed help meet operating expenditures and provide sustainable replacement of assets. It is also envisaged that the CFC will generate enough income to sustain and grow, making it an absolutely viable project.

The estimated user charges are presented in table below:

Table 22: User Charges for Machinery

REVENUE GENERATION AT CFC													
S. No.	Machine Name	No. Of Machines	User Charge per hour (Rs.)	No. Of Working hours per day	No. Of Working days per month	Revenue per month (Rs. lakh)	Annual Revenue generation (in Rs. lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)
								Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
								75%	80%	85%	90%	95%	100%
1	Wire cut	1	1000	8	25	2.00	24.00	18.00	19.20	20.40	21.60	22.80	24.00
2	EDM	1	1000	8	25	2.00	24.00	18.00	19.20	20.40	21.60	22.80	24.00
3	Boring machine	1	1000	8	25	2.00	24.00	18.00	19.20	20.40	21.60	22.80	24.00
4	VMC	1	1200	8	25	2.40	28.80	21.60	23.04	24.48	25.92	27.36	28.80
S. No.	Machine Name	No. Of Machines	Rate per test (Rs.)	No. of tests per month	No. Of Working days per month	Revenue per month (Rs. lakh)	Annual Revenue generation (in Rs. lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)
								Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
								75%	80%	85%	90%	95%	100%
1	Vibration tester	1	8000	30	25	2.40	28.80	18.00	19.20	20.40	21.60	22.80	24.00
2	Video measurement machine	1	7500	30	25	2.25	27.00	18.00	19.20	20.40	21.60	22.80	24.00
3	Spectrometer	1	500	100	25	0.50	6.00	18.00	19.20	20.40	21.60	22.80	24.00
	Total						162.60	129.60	138.24	146.88	155.52	164.16	172.80

6.7 Estimation of profitability: Income and Expenditure statement

The projection for income and expenditures of the CFC has been conducted for ten years. The projections have been undertaken based upon the income and expenditure heads mentioned in previous sections. The projected statements highlight income, expenses, profits earned, income tax and net profit etc. The details are presented in the table below:

The total gross revenue is estimated to be INR 26.44 lakhs for the first year of operation at an operating capacity of 75%. For projection purposes, operating capacity of 75% is considered during first year, 80% during second year and 100% capacity from 6th year onwards.

The income tax rates have been considered depending upon the announcement made in the Budget 2017 and the tax applicable to a Pvt. Limited Company. Income tax has been considered at 26 per cent on taxable profit inclusive of all the tax components. The incidence of tax ranges from INR 9.32 lakhs in the first year to INR 22.87 lakhs in Year 10.

Table 23: Income and Expenditure Statement

PROFIT & LOSS ACCOUNT										
Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Number of working days	300	300	300	300	300	300	300	300	300	300
Number of shift	1	1	1	1	1	1	1	1	1	1
Capacity Utilisation in %	**75%**	**80%**	**85%**	**90%**	**95%**	**100%**	**100%**	**100%**	**100%**	**100%**
A. Income										
(User/ Service Charge)	**129.60**	**138.24**	**146.88**	**155.52**	**164.16**	**172.80**	**172.80**	**172.80**	**172.80**	**172.80**
B. Cost of Production :										
1. Utilities Power (Fixed + Variable)	6.97	7.33	7.70	8.07	8.44	8.81	8.81	8.81	8.81	8.81
2. Direct labour and wages	26.88	28.67	30.46	32.25	34.05	35.84	35.84	35.84	35.84	35.84
3. Consumable	2.33	2.48	2.64	2.80	2.95	3.11	3.11	3.11	3.11	3.11
4. Repair and Maintenance	5.22	5.57	5.92	6.27	6.62	6.96	6.96	6.96	6.96	6.96

5. Depreciation	36.20	30.74	26.14	22.22	18.89	16.06	13.66	11.61	9.87	8.39
Total Cost of production	**77.60**	**74.80**	**72.86**	**71.61**	**70.94**	**70.78**	**68.37**	**66.33**	**64.59**	**63.11**
C. Administrative expenses :										
6. Manpower (Indirect)	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60
7. Rent	5.40	5.94	6.53	7.19	7.91	8.70	9.57	10.52	11.58	12.73
8. Insurance	1.20	1.03	0.87	0.74	0.63	0.54	0.46	0.39	0.33	0.28
9. Misc Expense	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total Administrative Expenses	**14.20**	**14.57**	**15.01**	**15.53**	**16.14**	**16.83**	**17.62**	**18.51**	**19.51**	**20.61**
D. Financial expenses :										
10. Interest on Working capital loan @ 11% per annum	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Total Financial Expenses	**1.10**	**1.10**	**1.10**	**1.10**	**1.10**	**1.10**	**1.10**	**1.10**	**1.10**	**1.10**
E. Total Expenses B+C+D	**92.90**	**90.47**	**88.97**	**88.24**	**88.18**	**88.71**	**87.10**	**85.94**	**85.19**	**84.82**
F. Profit A - E	**36.70**	**47.77**	**57.91**	**67.28**	**75.98**	**84.09**	**85.70**	**86.86**	**87.61**	**87.98**
G. P&P Expenses written off	0.84	0.84	0.84	0.84	0.84	0.00	0.00	0.00	0.00	0.00
H. Income before Tax (F-G)	**35.86**	**46.93**	**57.08**	**66.44**	**75.14**	**84.09**	**85.70**	**86.86**	**87.61**	**87.98**
I. Adjustment of Loss	-	-	-	-	-	-	-	-	-	-
J. Income Tax (@25.75% for company)	9.32	12.20	14.84	17.28	19.54	21.86	22.28	22.58	22.78	22.87
K. Net Profit /Loss for the year	**26.54**	**34.73**	**42.24**	**49.17**	**55.60**	**62.22**	**63.42**	**64.28**	**64.83**	**65.10**
L. Cumulative Surplus	**26.54**	**61.27**	**103.51**	**152.67**	**208.28**	**270.50**	**333.93**	**398.20**	**463.03**	**528.13**

As evident from the table above, the project is financially viable. A cumulative surplus of about Rs. 510.74 Lakh shall be earned by the SPV even after accounting for taxation and depreciation at the end of ten years. This surplus generated shall be used for further addition in the

machinery or improvement and up-gradation of facilities. Additionally, the SPV intends to conduct a lot of other development activities in the cluster that shall be funded through the surplus earned at the CFC.

6.8 Cash flow statement

Cash flow statement indicates the cash balance and the liquidity position of the project over the years. The table below presents the sources and disposal/uses of funds statement of the project.

Table 24: Cash Flow Statement

CASH FLOW STATEMENT											
Particulars	Construction Period	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
A. Source Funds :											
1. Cash Accruals (Net Profit + Interest Paid)		37.80	48.87	59.01	68.38	77.08	85.19	86.80	87.96	88.71	89.08
2. Increase in capital	70.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3. Depreciation		36.20	30.74	26.14	22.22	18.89	16.06	13.66	11.61	9.87	8.39
4. Increase in WC Loan		10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Increase in Grant-in-aid from GoH	180.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Sources of Funds	**250.53**	**84.00**	**79.61**	**85.15**	**90.60**	**95.97**	**101.25**	**100.46**	**99.57**	**98.58**	**97.47**
B. Use of Funds :											
1. P&P Expenses	4.18	-	-	-	-	-	-	-	-	-	-
2. Increase in fixed assets	241.53	-	-	-	-	-	-	-	-	-	-
3. Increase in other Assets	4.81	20.00	2.96	3.16	3.39	3.63	3.91	3.29	3.62	3.99	4.38
4. Increase in Sundry Debtors		10.80	0.72	0.72	0.72	0.72	0.72	0.00	0.00	0.00	0.00
5. Interest		1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
6. Taxation		9.32	12.20	14.84	17.28	19.54	21.86	22.28	22.58	22.78	22.87

Total Use of Funds	250.53	41.22	16.98	19.82	22.48	24.99	27.59	26.68	27.31	27.86	28.36
C. Net Surplus (A -B)		42.78	62.63	65.33	68.12	70.98	73.66	73.78	72.27	70.72	69.11
D. Cumulative Surplus		42.78	105.41	170.74	238.86	309.84	383.50	457.28	529.55	600.26	669.37

The cash flow statement shows the available net surplus for 10 years of the CFC operations. As most of the capital expenditure is being supported as grant under the State Mini Cluster Development Scheme (EPP 2015), therefore it does not have any negative effect on the Cash flow, in terms of interest, etc.

6.9 Projected Balance Sheets

The annual balance sheets for the CFC have been projected based upon estimates in the earlier sub-sections with regard to various current and fixed liabilities and also current and fixed assets. As evident from the projections, a considerable amount of reserves and surplus gets accumulated. These shall also be utilized for expansion of the CFC and undertaking other cluster development activities. Decision on deployment of reserves and surplus accumulated will be based on the performance of the project and requirements of cluster firms and members of the SPV. The projected balance sheets are provided in the table below:

Table 25: Balance Sheet

PROJECTED BALANCE SHEET											
Particulars	At the end of impl. Period	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
1. Fixed Assets :											
Gross Block	241.53	241.53	205.33	174.58	148.45	126.23	107.33	91.27	77.61	66.00	56.13
Less : Depreciation (WDV)		36.20	30.74	26.14	22.22	18.89	16.06	13.66	11.61	9.87	8.39
Net Block	241.53	205.33	174.58	148.45	126.23	107.33	91.27	77.61	66.00	56.13	47.73
Total Fixed Assets (A)	**241.53**	**205.33**	**174.58**	**148.45**	**126.23**	**107.33**	**91.27**	**77.61**	**66.00**	**56.13**	**47.73**

2. Current Assets :											
Cash & bank Surplus (B.F)		42.78	105.41	170.74	238.86	309.84	383.50	457.28	529.55	600.26	669.37
Sundry Debtors		10.80	11.52	12.24	12.96	13.68	14.40	14.40	14.40	14.40	14.40
Margin Money for WC Loan	4.81	4.81	5.77	6.73	7.70	8.68	9.65	9.73	9.81	9.89	9.99
Other Current Assets		20.00	22.00	24.20	26.62	29.28	32.21	35.43	38.97	42.87	47.16
P&P Exp	4.18	3.34	2.51	1.67	0.84	0.00	0.00	0.00	0.00	0.00	0.00
Total current Assets (B)		**81.74**	**147.21**	**215.58**	**286.97**	**361.47**	**439.76**	**516.84**	**592.73**	**667.43**	**740.92**
Total Assets (A+B)	**250.53**	**287.06**	**321.79**	**364.03**	**413.20**	**468.80**	**531.03**	**594.45**	**658.73**	**723.56**	**788.66**
3. Current Liabilities :											
Working Capital Loan		10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Total Current Liabilities (C)		**10.00**	**10.00**	**10.00**	**10.00**	**10.00**	**10.00**	**10.00**	**10.00**	**10.00**	**10.00**
4. Fixed Liabilities											
Shareholders' Contribution	70.53	70.53	70.53	70.53	70.53	70.53	70.53	70.53	70.53	70.53	70.53
Grant from GoH	180.00	180.00	180.00	180.00	180.00	180.00	180.00	180.00	180.00	180.00	180.00
Reserves and Surplus		26.54	61.27	103.51	152.67	208.28	270.50	333.93	398.20	463.03	528.13
Total Fixed Liabilities (D)	**250.53**	**277.06**	**311.79**	**354.03**	**403.20**	**458.80**	**521.03**	**584.45**	**648.73**	**713.56**	**778.66**
Total Liabilities (C+D)	**250.53**	**287.06**	**321.79**	**364.03**	**413.20**	**468.80**	**531.03**	**594.45**	**658.73**	**723.56**	**788.66**

6.10 Break-even analysis

The break-even (BE) estimates of the project indicate the level of activity at which the total revenues of the project equal the total costs. It also portrays whether the revenue contribution is sufficient to meet the fixed costs. From this point, the project is expected to start generating profits. As per the calculations, the CFC achieves break even in the first year itself as no major interest costs are being incurred. Hence, BE estimates at level of activity relevant to the first year and subsequent years of activity are provided in the table below:

Table 26: Break Even Estimates

BREAKEVEN POINT AT VARIOUS C.U.										
Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Capacity Utilization	75%	80%	85%	90%	95%	100%	100%	100%	100%	100%
A. Total Earning by way of user charges	129.60	138.24	146.88	155.52	164.16	172.80	172.80	172.80	172.80	172.80
B. Variable costs										
Consumables	2.33	2.48	2.64	2.80	2.95	3.11	3.11	3.11	3.11	3.11
Utilities (power- variable charge)	5.53	5.90	6.27	6.64	7.00	7.37	7.37	7.37	7.37	7.37
Interest on WC Loan	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Repair & Maintenance	5.22	5.57	5.92	6.27	6.62	6.96	6.96	6.96	6.96	6.96
Manpower (Direct)	26.88	28.67	30.46	32.25	34.05	35.84	35.84	35.84	35.84	35.84
Total Variable Cost (B)	41.06	43.72	46.39	49.05	51.72	54.38	54.38	54.38	54.38	54.38
C. Contribution (A-B)	88.54	94.52	100.49	106.47	112.44	118.42	118.42	118.42	118.42	118.42
D. Fixed Overheads (Cash)										
Manpower (Indirect)	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60
Utilities (Power - fixed charges)	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44
Rent	5.40	5.94	6.53	7.19	7.91	8.70	9.57	10.52	11.58	12.73

Insurance	1.20	1.03	0.87	0.74	0.63	0.54	0.46	0.39	0.33	0.28
Misc. Expenditure	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sub-total (D)	**15.64**	**16.00**	**16.44**	**16.97**	**17.57**	**18.27**	**19.06**	**19.95**	**20.94**	**22.05**
E. Fixed Overheads (Non-cash)										
Depreciation	36.20	30.74	26.14	22.22	18.89	16.06	13.66	11.61	9.87	8.39
Preliminary & Pre-operative expenses written off	0.84	0.84	0.84	0.84	0.84	0.00	0.00	0.00	0.00	0.00
Sub-total (E)	**37.04**	**31.58**	**26.97**	**23.06**	**19.73**	**16.06**	**13.66**	**11.61**	**9.87**	**8.39**
F. Total Fixed Overheads (D+E)	**52.68**	**47.58**	**43.42**	**40.02**	**37.30**	**34.33**	**32.72**	**31.56**	**30.81**	**30.44**
Break-even point (F/C)	**59%**	**50%**	**43%**	**38%**	**33%**	**29%**	**28%**	**27%**	**26%**	**26%**

Book break-even is achieved at 59% (of operational capacity at 75 per cent) and at 50 % (of operational capacity at 80 percent). The operation of the CFC is expected to break-even and realizes profit from 1st year of operations. Therefore, very low risk is involved in the project.

6.11 Feasibility analysis summary and sustainability indicators

A summary of the financial analysis in terms of key financial indicators such as Return on Capital Employed (ROCE), Net Present Value (NPV), Break Even Point (BEP) and the Internal Rate of Return (IRR) is presented in the table below. The indicators validate the financial viability and sustainability potential of the proposed project.

Table 27: Financial Analysis

FEASIBILITY		
S. No.	Particulars	Estimates
1	BEP (cash BEP at initial operating capacity of 75%)	59.50%
2	Av. ROCE (PAT/CE)	28.93%
3	Internal Rate of Return (IRR)	24.69%
4	Net Present Value (at a discount rate of 10 per cent) - incorporating viability gap funding (grant) by GoH	NPV is positive and high (Rs. 184.96 lacs) at a conservative project life of 10 years
5	Payback period	4.58 years with Grant-in-aid assistance from GOH
6	DSCR	Not Applicable (non-availment of term loan in this project)

The annual estimates in the context of ROCE are presented in the table below:

Table 28: Calculation of Return on Capital Employed

RETURN ON CAPITAL EMPLOYED (ROCE)											
Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	AVE.
ROCE = EBIT/Capital Employed											
ROCE	14.75%	19.17%	23%	26.96%	30.43%	34.00%	34.65%	35.11%	35.41%	35.56%	28.93%

The average value of ROCE (with grant-in-aid) is 28.93%. This indicates high techno-economic viability of the project should the government contribute a significant portion of the project cost as grant. Capital employed considered includes the SPV contribution as well as the grant component to the project.

The Net Present Value, estimated at a discount rate of 10%, is Rs. 184.96. As reflected from the high values of NPV, it is positive at even 10%, the rate at which bank offers debt capital facility and even at higher discount rates. Project IRR is high at over 28.93% (at a conservative project life of 10 years). This substantiates the viability of the project.

6.12 Additional revenue sources

Additional sources of revenue shall also be explored by the SPV by offering procurement and marketing services in future to more enterprises. The SPV members are strong believers of the cluster concept and would like to explore the potential of undertaking cluster initiatives to improve the backward and forward linkages of the cluster units.

However, in order to ensure conservativeness in income estimates, in the initial years, the income earning possibilities of such revenues are not captured in this DPR.

6.13 Risk Analysis & Sensitivities

Risk in the project is relatively low in the context of the following:

- **Promoters are experienced**: Risk in the project is quite low given the strength and profile of the SPV members. They have considerable experience not only in the engineering industry but also in undertaking cluster developmental initiatives.
- **Facility is pre-marketed:** Evidently, complete capacity of the core facility to be established in terms of various facilities may be easily availed by members of the SPV themselves, thus the facility would already have a captive market.
- **Sustainability indicators in terms of the strength of the SPV and the economics of the project:** Evidence of cooperative initiatives of SPV members as articulated in previous chapters; in terms of pursuing several joint efforts, registering the SPV and proceeding towards procurement of land, and securing commitment from members, vis-à-vis progressively mobilizing necessary paid up capital, all reflect the strength of the SPV.

High economic viability indicators upon considering the benefits of grant-in-aid under the State Mini Cluster Development Scheme and EPP 2015 also serve as evidence of techno-economic viability and sustainability of the project. A sensitivity analysis has been carried out to ascertain the impact on the project, should there be any loss of revenue. This has been calculated assuming drop in user charges. Major financial parameters are still attractive. The important parameters related to the sensitivity analysis are presented in the table below:

Table 29: Sensitivity Analysis

SENSTIVITY ANALYSIS					
S. No.	Particulars	Base case	With 5% decline in user charge	With 10% decline in user charge	With 15% decline in user charge
1	BEP (cash BEP at operating capacity of 75%)	59.50%	64.19%	69.70%	76.11%
2	Internal Rate of Return (IRR)	24.69%	22.15%	19.58%	16.80%
3	Av. ROCE (PAT/CE) (with Grant)	28.93%	25.79%	22.64%	19.40%
4	Net Present Value (at a discount rate of 10 per cent) - incorporating viability gap funding (grant) GoH	186.17	150.33	115.62	80.07

Even assuming reduction in user charges, ROCE is favourable. From the above, it is evident that the project is viable even under (unlikely) risky environment circumstances.

6.14 Assumptions for financial calculations:

The financial statements and project profitability estimates in this DPR are based on the following assumptions:

1. The total project cost is pegged @ Rs. 250.73 Lakh on the basis of estimates and quotations.

2. To finance the project, a total of Rs. 250.73 Lakhs is required. The financing will consist of grant from Government of Haryana and contribution by SPV.

In the financial projections and analysis, year 2018 is the envisaged period of project implementation also involving installation of plant, machinery and other equipment. This period will commence from the date of final approval by the State Level Steering Committee under State Mini Cluster Development Scheme. The financial projections thereafter are prepared for 10 years of operation starting 2019.

4. The registered SPV will manage the CFC, and these services are to be used by the SPV to member as well as non-member units. The common facility will benefit registered SPV as well as non-member firms who (in some cases) may not afford to contribute to necessary equity capital.

5. The CFC will operate for 25 days a month, that is, for 300 days a year on an eight hour single shift basis. Operation on single shift basis is assumed for purposes of projecting income estimates.

6. Capacity utilization is assumed at 75% in the first year; 80% for second, 85% for third year and 100% from 6^{th} year onwards.

7. The workings with regard to expenses related to the project have been tabulated and categorized in terms of those related to consumables, manpower, electricity, and miscellaneous administrative expenditures.

8. Repairs and maintenance is provided @ 3% of plant and machinery cost at varying capacity utilization.

9. Insurance is provided @ 0.5% on fixed assets including building & civil works, machinery, contingency as fixed cost at all capacity utilization.

10. Electricity connection will not be required as it is already present in the building.

11. Fixed charges per kW of electric connection shall be charged @ Rs. 170 and variable charges @ Rs. 8 per unit consumed.

12. Income estimates have been projected most conservatively. The prescribed user charges are competitive vis-à-vis charges for similar services in other regions.

13. Depreciation on fixed assets is calculated on Written Down Value (WDV) method for all purposes.

14. Debtors' collection period is taken at 3 months of calculation of Working Capital Limits.

15. Provision for income tax has been made @ 26% (excluding cess).

16. Profitability estimates in terms of ROCE, NPV, and IRR are computed considering operating results for first 10 years of operation.

Project Implementation and Monitoring

7 Project Implementation and Monitoring

7.1 Envisaged Implementation Framework

1. **Time frame:** Project implementation is envisaged to involve a time-frame of about 7 months upon receipt of final approval of grant-in-aid assistance from the Government of Haryana under state mini cluster development scheme.

2. **User Base:** The facilities may be used by SPV members and non-members. However, the charges will vary. The SPV will also be open for new entrants subject to them subscribing to the shareholding of the SPV, and them being genuinely pro-active and interested in cluster initiatives. The board of directors of the SPV can decide on same or differential user charges for both members and non-members or based upon the volume of the output.

3. **Project implementation schedule:** The project implementation schedule envisaged over a period of 7 months involves several activities. These are elaborated upon in the table below:

Table 30: Project Implementation Schedule

Activity/Month	1	2	3	4	5	6	7
Contribution from SPV members							
Receipt of final sanction from GoH							
Lease deed agreement of building in the name of SPV							
Refurbishment of building							
Formation of purchase committee							
Inviting E-tenders for purchase of machines							
Obtaining statutory clearances and approvals							
Purchase of machinery and equipment							
Installation and trial run of machinery and equipment							
Arrangement of working capital							
Monitoring of the project by Board of Directors							
Monitoring of the project by PMC							

Activity/Month	1	2	3	4	5	6	7
Commencement of operations of the facility							

4. **Contractual agreements/MoU with member units:** Agreements have been indicatively finalized in terms of utilization of assets in respect of shareholders.

   A total of 10 units are participating in the SPV and all these units have agreed to contribute towards the capital contribution of the SPV. The utilization of the common facility will be in line with the proposed shareholding pattern. The consent letter wherein the member units agree for payments of 10% share of cost of CFC will be submitted in due course of and as per final approval from Government of Haryana.

5. **Registration of the Private Limited Company:** Company registration is indicative of the management and decision making structure of the SPV. All the members of SPV have paid an advance and are members of the Registered Private Entity. Few other units are also willing to be members of the SPV and once the CFC is approved and sanctioned from government of Haryana, many more members will be interested to subscribe to the shares of the SPV.

6. **Availability of Building & Status of Acquisitions**: A building will be leased by the SPV for the proposed CFC in the Rewari district. A floor of a building of 3000 square feet has already been identified by the SPV and a letter establishing the proof of availability of the building has been acquired and attached in ***Annexure 4.***

7. **Availability of Requisite Clearances:** A building with all required clearances will be leased by the SPV. Electricity is already available in the area and the building is connected to the grid. The other required clearances (environment, labor etc.) shall be obtained in due course.

8. **O & M Plan:** The revenue stream for O&M is dependent on realization of user charges from the SPV members and other users/MSMEs in the case of various facilities. As detailed in the financial section, the cash incomes are sufficient to meet operating expenditures, overheads as well as depreciation for sustainable replacement of assets. The SPV will also have to keep a track of maintenance of assets through collection of user charges from the members/ users.

7.2 Monitoring Mechanism

As mentioned in the implementation schedule, the following key activities shall be conducted during establishment of the CFC:

- Purchase of machinery & commissioning
- Trial production
- Commercial production

The successful implementation of above activities will depend on the following aspects:

- Implementation of above within the time frame.
- Supervising and overseeing the implementation of the proposals and fine tuning and advocating more measures if needed, depending on the building conditions.
- Project level monitoring indicators to evaluate the implementation of the CFC proposal at recommended intervals.
- Suitable purchase mechanisms for proposed plant & machinery.
- Periodical reporting of the status of implementation and monitoring of the results of key performance indicators, and
- Constant evaluation of the measures implemented based on the data available from project level monitoring, status reports and providing directions accordingly.

The committee may operate under the overall monitoring of the State Level Steering Committee (SLSC). Other key stakeholders such as representatives of cluster SPV, related government departments, support institutions, cluster level industry associations and consultants may be inducted as members under the committee.

The committee may operate under the overall monitoring of the State Level Steering Committee (SLSC). Other key stakeholders such as representatives of cluster SPV, related government departments, support institutions, cluster level industry associations and consultants may be inducted as members under the committee.

The members may comprise the following:

i. Director, Industries and Commerce, Government of Haryana (Chairman)
ii. Concerned Joint Director, Department of Industries and Commerce
iii. HSIIDC state officer
iv. HFC/ scheduled bank general Manager
v. President of related industry association
vi. Directors of related SPV
vii. EY Cluster Development Expert under MSME project

For implementing the CFC creation for Rewari General Engineering Cluster, a Project Management Committee (PMC) comprising the Joint Director, DIC, Rewari and representatives of SPV, Leading Bank and EY experts shall be constituted to directly oversee effective monitoring and implementation.

The project will be implemented through SPV and PMC will report progress of implementation to the State Level Steering Committee and DIC Rewari.

Conclusion

8 Conclusion

The cluster faces an absence of Vibration Tester, Spectrometer, Video Measurement testing machines & machining facilities like EDM, Boring & Vertical Machining Centre. In the absence of these facilities, products from the cluster face high rate of rejection at the buyers end. The conventional method of machining work results in low quality & wastage of material. Micro and Small scale units in Rewari exist at the lower end of value chain and need immediate support to enhance their competitiveness. The units are heavily dependent on tier-II suppliers for orders and have less capacities to supply directly to tier-I & OEMs. The micro and small scale units lack the technical or capital resources to establish in house latest machining facilities.

The cluster firms have not been able to obtain bulk orders from large customers. This has been mainly due to lack of quality, production capacity and poor quality of product. The technologies required for up gradation are extremely expensive and any individual units in the cluster cannot adopt the same. Hence, the following facilities have been proposed in the CFC:

- Advanced Testing Lab with Vibration, Video measurement & Spectrometer testing facilities
- Advanced Machining Facilities

The total project cost is estimated to be **INR 250.53 lakhs.** The project shall be implemented by the **Czone Testers & Engimech Pvt Ltd** which has been constituted by the cluster firms. The SPV has proactively undertaken a number of initiatives for capacity building and knowledge enhancement of the cluster. A number of capacity building programs have been organised by the SPV for the benefit for its members. The CFC will be set up with support from DIC and the state government (Department of Industries) under a PPP mode. The building for the project has already been identified by the SPV and shall be acquired on a lease basis upon in final approval by State Government. The state industry department is envisaged to provide grant for setting up of the CFC under the State Mini-Cluster Development Scheme, EPP 2015. The support from State Mini Cluster Development Scheme of the State Government of Haryana is envisaged for **INR 180.00 lakh,** and the SPV members will contribute **INR 70.53 lakhs** towards the project cost. The working capital requirement for the project, if required, will be provided by the preferred bank. The project is financially viable and is expected to generate enough revenue to ensure its sustainability.

Annexures

9 Annexures

1. DSR Approval Letter from Department of Industries & Commerce, Government of Haryana

From

The Director of Industries & Commerce, Haryana,
Chandigarh.

To

M/s Ernst & Young LLP,
SCO-166-167, 1st Floor, Sector 9-C, Madhya Marg,
Chandigarh.
Email :- upinder.dhingra@in.ey.com

Memo No. Mini Cluster/General Engineering/Rewari/ 9962 - A
Dated:-11.06.2018

Subject: **Approval of Diagnostic Study Report (DSR) and directions for preparation of Detailed Project Report (DPR) of Rewari General Engineering Cluster.**

Kindly refer to the subject cited above.

It is informed that the Diagnostic Study Report (DSR) of Rewari General Engineering Cluster has been approved by Director of Industries and Commerce under the State Mini Cluster Development Programme scheme.

EY LLP is directed to ensure broad basing of the constitution of SPV before initiating steps for preparation of Detailed Project Report (DPR) of the above said cluster.

Consultant (Cluster)
for Director of Industries & Commerce, Haryana

Endst. No. Mini Cluster/General Engineering/Rewari/ 9968-A Dated:- 11.06.2018

A copy of the above is forwarded to;

1. SPV, Rewari General Engineering Cluster for information. They are directed to provide the requisite information desired by EY LLP so as to enable them to prepare the DPR at the earliest. SPV is also advised to broad base their constitution and raise the number of SPV members. Email:- czoneengineering@gmail.com , sandeeppanghal0007@gmail.com
2. Assistant Director, DIC, Rewari.

Received
Dhesin P. Negi
12/6/18.

11.6.18
Consultant (Cluster)
for Director of Industries & Commerce, Haryana

2. Certificate of Incorporation

GOVERNMENT OF INDIA
MINISTRY OF CORPORATE AFFAIRS

Central Registration Centre

Certificate of Incorporation

[Pursuant to sub-section (2) of section 7 of the Companies Act, 2013 (18 of 2013) and rule 18 of the Companies (Incorporation) Rules, 2014]

I hereby certify that CZONE TESTERS AND ENGIMECH PRIVATE LIMITED is incorporated on this Seventeenth day of June Two thousand eighteen under the Companies Act, 2013 (18 of 2013) and that the company is limited by shares.

The Corporate Identity Number of the company is U25209HR2018PTC074615.

The Permanent Account Number (PAN) of the company is **AAHCC6323Q**

The Tax Deduction and Collection Account Number (TAN) of the company is **RTKC05005A***

Given under my hand at Manesar this Seventeenth day of June Two thousand eighteen .

Digital Signature Certificate
Mr. Wagh Tushar Mohan

For and on behalf of the Jurisdictional Registrar of Companies
Registrar of Companies
Central Registration Centre

Disclaimer: This certificate only evidences incorporation of the company on the basis of documents and declarations of the applicant(s). This certificate is neither a license nor permission to conduct business or solicit deposits or funds from public. Permission of sector regulator is necessary wherever required. Registration status and other details of the company can be verified on www.mca.gov.in

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Mailing Address as per record available in Registrar of Companies office:

CZONE TESTERS AND ENGIMECH PRIVATE LIMITED
Plot No. 71/12, HUDA Industrial Area, DHARUHERA, Rewari, Haryana,
India, 123106

* as issued by the Income Tax Department

2.a Memorandum of Association (MoA)

COMPANIES ACT 2013

COMPANY LIMITED BY SHARES

MEMORANDUM OF ASSOCIATION

OF

M/s CZONE TESTERS AND ENGIMECH PRIVATE LIMITED

1 The name of the Company is **CZONE TESTERS AND ENGIMECH PRIVATE LIMITED**

2 The Registered Office of the Company will be situated in the State of Haryana.

3 The objects for which the Company is established are:-

(a) **THE MAIN OBJECTS OF THE COMPANY TO BE PURSUED BY THE COMPANY ON ITS INCORPORATION ARE:**

1. To function as Special Purpose Vehicle (SPV) and Set up Common Facilities Centre(CFC) and other infrastructure activities for Engineering & allied Industry and for the benefits of its members and Industry/concerned stakeholders following the guidelines and notifications for State Mini Cluster Development Scheme of Govt. of Haryana.

2. To undertake works/scheme/programs of Government relating to growth and development of Engineering & Allied Industry and carry out/conduct soft and hard intervention activities under State Mini Cluster Development Scheme of Govt. of Haryana.

3. To act as a resource center for development and strengthening network as Business Development Services related to Technology, Market, Capacity building and Hand holding support for the purpose of growth and development of the Engineering & Allied Industry under State Mini Cluster Development Scheme of Govt. of Haryana.

4. To make available raw and packing material to all members of Engineering & allied industry at competitive rates by opening of raw and packing material bank.

5. To arrange latest technology for upgrading all manufacturing units to provide Quality certificate to its members.

6. To render assistance and encouragement as may be necessary to persons engaged in Engineering and/or Manufacturing Industry.

7. To undertake job work, manufacturing, import, export of all type of Engineering & allied products and research work in connection with development of Engineering & allied Industry.

8. To conduct training programs/seminars for capacity building and skill enhancement of workers in the engineering & allied industry.

9. No salary/interest/dividend shall be paid to any stakeholder of the company.

10. No profit will be distributed amongst any member. All profit shall be ploughed back in the business & added to reserves & surplus.

b) THE OBJECTS INCIDENTAL OR ANCILLARY TO THE ATTAINMENT OF THE MAIN OBJECTS ARE:

1 To purchase, exchange or otherwise any movable or immovable property and any rights or privileges which the Company may deem necessary or convenient for the purpose of its main business.

2 To enter into partnership or into any arrangement for sharing profits, union of interest, joint venture, reciprocal concession or co-operation with persons or companies carrying on or engaged in the main business or transaction of this Company.

3 To import, buy, exchange, alter, improve and manipulate in all kinds of plants, machinery, apparatus, tools and things necessary or convenient for carrying on the main business of the Company.

4 To vest any movable or immovable property, rights or interests required by or received or belonging to the Company in any person or company on behalf of or for the benefit of the Company and with or without any declared trust in favour of the Company.

5 To purchase, build, carry out, equip, maintain, alter, improve, develop, manage, work, control and superintend any plants, warehouse, sheds, offices, shops, stores, buildings, machinery, apparatus, labour lines, and houses, warehouses, and such other works and conveniences necessary for carrying on the main business of the Company.

6 To undertake or promote scientific research relating to the main business or class of business of the Company.

7 To takeover the whole or any part of the business, goodwill, trade-marks properties and liabilities of any person or persons, firm, companies or undertakings either existing or new, engaged in or carrying on or proposing to carry on business this Company is authorised to carry on, possession of any property or rights suitable for the purpose of the Company and to pay for the same either in cash or in shares or partly in cash and partly in shares or otherwise.

8 To negotiate and enter into agreements and contracts with Indian and foreign individuals, companies, corporations and such other organizations for technical, or any other such assistance for carrying out all or any the main objects of the Company or for the purpose of activity research and development of manufacturing projects on the basis of know-how, or technical collaboration and necessary formulas and patent rights for furthering the main objects of the Company.

9 Subject to the Provisions of the Companies Act 2013, to amalgamate with any other company of which all or any of their objects companies having similar to the objects of the Company in any manner whether with or without the liquidation.

10 Subject to any law for the time being in force, to undertake or take part in the formation, supervision or control of the business or operations of any person, firm, body corporate, association undertaking carrying on the main business of the Company.

11 To apply for, obtain, purchase or otherwise and prolong and renew any patents, patent-rights, brevets, inventions, processes, scientific technical or other assistance, manufacturing processes know-how and other information, patterns, copyrights, trade-marks, licenses concessions and the like rights or benefits, conferring an exclusive or non-exclusive or limited or unlimited right of use thereof, which may seem capable of being used for or in connection with the main objects of the Company or the acquisition or use of which may seem calculated directly or indirectly to benefit the Company on

payment of any fee royalty or other consideration and to use, exercise or develop the same under or grant licenses in respect thereof or otherwise deal with same and to spend money in experimenting upon testing or improving any such patents, inventions, right or concessions.

12 To apply for and obtain any order under any Act or Legislature, charter, privilege concession, license or authorisation of any Government, State or other Authority for enabling the Company to carry on any of its main objects into effect or for extending any of the powers of the Company or for effecting and modification of the constitution of the Company or for any other such purpose which may seem expedient and to oppose any proceedings or applications which may seem expedient or calculated directly or indirectly to prejudice the interest of the Company.

13 To enter into any arrangements with any Government or Authorities or any persons or companies that may seem conducive to the main objects of the Company or any of them and to obtain from any such Government, authority, person or company any rights, charters, contracts, licenses and concessions which the Company may think desirable to obtain and to carry out, exercise and comply therewith.

14 To procure the Company to be registered or recognised in or under the laws of any place outside India and to do all act necessary for carrying on in any foreign country for the business or profession of the Company.

15 To draw, make, accept, discount, execute and issue bills of exchange, promissory notes bills of lading, warrants, debentures and such other negotiable or transferable instruments, of all types or securities and to open Bank Accounts of any type and to operate the same in the ordinary course of the Company.

16 To advance money either with or without security, and to such persons and upon such terms and conditions as the Company may deem fit and also to deal with the money of the Company not immediately required.

17 To undertake and execute any trusts, the undertaking of which may seem to the Company desirable, either gratuitously or otherwise.

18 To establish, or promote or concur in establishing or promote any company for the purpose of dealing all or any of the properties, rights and liabilities of the Company.

19 To sell, mortgage, exchange, grant licenses and other rights improve, manage, develop and dispose of undertakings, properties, assets and effects of the company or any part thereof for such consideration as may be expedient and in particular for any shares, stocks, debentures or other securities of any other such company having main objects altogether or in part similar to those of the Company.

20 Subject to the Provisions of Companies Act 2013, to distribute among the members in specie or otherwise any property of the Company or any proceeds of sale or disposal of any property of the Company in the event of winding up.

21 To distribute as dividend or bonus among the member or to place to reserve or otherwise to apply, as the Company may, from time to time, determine any money received by way of premium on debentures issued at a premium by the Company and any money received in respect of forfeited shares, money arising from the sale by the Company of forfeited shares subject to the provisions of Sec. 52 of the Companies Act, 2013.

22 To employ agents or experts to investigate and examine into the conditions, prospects value, character and circumstances of any business concerns and undertakings and generally of any assets properties or rights which the Company purpose to acquire.

23 To create any reserve fund, sinking fund, or any other such special funds whether for depreciation, repairing, improving, research, extending or maintaining any of the properties of the Company or for any other such purpose conducive to the interest of the Company.

24 Subject to the provisions of Section 179 to 183 of Companies Act, 2013, to subscribe contribute, gift or money, rights or assets for any national educational, religious, charitable, scientific, public, general or usual objects or to make gifts or such other assets to any institutions, clubs, societies, associations, trusts, scientific research associations, funds, universities, college or any individual, body of individuals or bodies corporate.

25 To establish and maintain or procure the establishment and maintenance of any contributory or non-contributory pension or superannuation, provident or gratuity funds for the benefit of and give of procure the giving of the gratuities pensions, allowances, bonuses or emoluments of any persons who are or were at any time in the employment or service of the company or any company which is a subsidiary of the Company or is allied to or associated with the Company or with any such subsidiary company or who are or were at any time Directors or officers of the Company or any other company as aforesaid and the wives, widows, families and dependents of any such persons and also to establish and subsidies and subscribe to any institutions, associations, club or funds calculated to be for the benefit of or advance aforesaid and make payments to any such persons as aforesaid and to do any of the matters aforesaid, either alone or in conjunction with any such other company as aforesaid.

26 To establish, for any of the main objects of the Company, branches or to establish any firm or firms at places in or outside India as the Company may deem expedient.

27 To pay for any property or rights acquired by or for any services rendered to the Company and in particular to remunerate any person, firm or company introducing business to the company either in cash or fully or partly-paid up shares with or without preferred or deferred rights in respect of dividend or repayment of capital or otherwise or by any securities which the company has power to issue or by the grant of any rights or options or partly in one mode and partly in another and generally on such terms as the company may determine.

28 To pay out of the funds of the company all costs, charges and expenses of and incidental to the formation and registration of the company and any company promoted by the company and also all costs, charges, duties, impositions and expenses of and incidental to the acquisition by the company of any property or assets.

29 To send out to foreign countries, its director, employees or any other person or persons for investigation possibilities of main business or trade procuring and buying any machinery or establishing trade and business connections or for promoting the interests of the company and to pay all expenses incurred in the connection.

30 To compensate for loss of office of any Managing Director or Directors or other officers of the Company within the limitations prescribed under the Companies Act or such other statute or rule

having the force of law and to make payments to any person whose office of employment or duties may be determined by virtue of any transaction in which the Company is engaged.

31 To agree to refer to arbitration any dispute, present or future between the Company and any other company, firm, individual or any other body and to submit the same to arbitration in India or abroad either in accordance with Indian or any foreign system of law.

32 To appoint agents, sub-agents, dealers, managers canvassers, sales, representatives or salesmen for transacting all or any kind of the main business of which this Company is authorised to carry on and to constitute agencies of the Company in India or in any other country and establish depots and agencies in different parts of the world..

4. The liability of the member(s) is limited and this liability is limited to the amount unpaid, if any, on the shares held by them

5. The Authorized Share Capital of the Company is Rs. 1,00,000/- (Rupees One Lac only) divided into 10,000 (Ten Thousand only) Equity Shares of Rs. 10/- (Rupees Ten each.)

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We several person whose name, address and description are subscribed below are desirous of being formed into a company, in pursuance of this **Memorandum of Association** and we respectively agree to take the number of shares in the capital of company set opposite to our respective names:-

S.No.	Names, Address, Description & occupation of the Subscriber	No. of Shares taken by each Subscriber	Signature	Signature, Name, Address, Description and occupation of the witness
01	Sh. Devender Kumar S/o Shri Bishamber Dayal R/o H.NO. 717/3, Saini Colony, NRP Bass Road, Dharuhera, Rewari, Haryana Description:Director Occupation : Business	5000/- equity shares of Rs. 10/- each	Sd/-	Sd/- The signature of the subscriber are attested below who signed before me. CA. Gaurav Gupta, FCA S/o Sh. Late Parmanand Gupta R/o H.No. 36, Ward-3, Dharuhera Distt-Rewari, Haryana-123106
02	Smt Suman Kumari W/o Sandeep Kumar R/o Vill Sureti, Teh Mahenderhgarh, Distt Mohindergarh, Haryana Description:Director Occupation : Home Worker	5000/- equity shares of Rs. 10/- each	Sd/-	
		10000/- equity shares of Rs. 10/- each.		

2.b Article of Association (AoA)

COMPANY LIMITED BY SHARES

ARTICLE OF ASSOCIATION

OF

M/s CZONE TESTERS AND ENGIMECH PRIVATE LIMITED

Interpretation

I. (1) In these regulations—

(a) "the Act" means the Companies Act, 2013, Private company clause as per companies act 2013. The company is a private company within the meaning of section 2(68) of the companies act 2013 and accordingly no invitation shall be issued to the public to subscribe for any securities of the company.

(b) "the seal" means the common seal of the company.

(2) Unless the context otherwise requires, words or expressions contained in these regulations shall bear the same meaning as in the Act or any statutory modification thereof in force at the date at which these regulations become binding on the company.

Share capital and variation of rights

II.

1. Subject to the provisions of the Act and these Articles, the shares in the capital of the company shall be under the control of the Directors who may issue, allot or otherwise dispose of the same or any of them to such persons, in such proportion and on such terms and conditions and either at a premium or at par and at such time as they may from time to time think fit.

2. (i) Every person whose name is entered as a member in the register of members shall be entitled to receive within two months after incorporation, in case of subscribers to the memorandum or after allotment or within one month after the application for the registration of transfer or transmission or within such other period as the conditions of issue shall be provided,—

(a) One certificate for all his shares without payment of any charges; or

(b) Several certificates, each for one or more of his shares, upon payment of twenty rupees for each certificate after the first.

(ii) Every certificate shall be under the seal and shall specify the shares to which it relates and the amount paid-up thereon.

(iii) In respect of any share or shares held jointly by several persons, the company shall not be bound to issue more than one certificate, and delivery of a certificate for a share to one of several joint holders shall be sufficient delivery to all such holders.

3. (i) If any share certificate be worn out, defaced, mutilated or torn or if there be no further space on the back for endorsement of transfer, then upon production and surrender thereof to the company,

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a new certificate may be issued in lieu thereof, and if any certificate is lost or destroyed then upon proof thereof to the satisfaction of the company and on execution of such indemnity as the company deem adequate, a new certificate in lieu thereof shall be given. Every certificate under this Article shall be issued on payment of twenty rupees for each certificate.

(*ii*) The provisions of Articles (*2*) and (*3*) shall *mutatis mutandis* apply to debentures of the company.

4. Except as required by law, no person shall be recognised by the company as holding any share upon any trust, and the company shall not be bound by, or be compelled in any way to recognise (even when having notice thereof) any equitable, contingent, future or partial interest in any share, or any interest in any fractional part of a share, or (except only as by these regulations or by law otherwise provided) any other rights in respect of any share except an absolute right to the entirety thereof in the registered holder.

5. (*i*) The company may exercise the powers of paying commissions conferred by sub-section (*6*) of section 40, provided that the rate per cent. or the amount of the commission paid or agreed to be paid shall be disclosed in the manner required by that section and rule made thereunder.

(*ii*) The rate or amount of the commission shall not exceed the rate or amount prescribed in rules made under sub-section (6) of section 40.

(*iii*) The commission may be satisfied by the payment of cash or the allotment of fully or partly paid shares or partly in the one way and partly in the other.

6. (*i*) If at any time the share capital is divided into different classes of shares, the rights attached to any class (unless otherwise provided by the terms of issue of the shares of that class) may, subject to the provisions of section 48, and whether or not the company is being wound up, be varied with the consent in writing of the holders of three-fourths of the issued shares of that class, or with the sanction of a special resolution passed at a separate meeting of the holders of the shares of that class.

(*ii*) To every such separate meeting, the provisions of these regulations relating general meetings shall *mutatis mutandis* apply, but so that the necessary quorum shall be at least two persons holding at least one-third of the issued shares of the class in question.

7. The rights conferred upon the holders of the shares of any class issued with preferred or other rights shall not, unless otherwise expressly provided by the terms of issue of the shares of that class, be deemed to be varied by the creation or issue of further share ranking *pari passu* therewith

8. Subject to the provisions of section 55, any preference shares may, with the sanction of an ordinary resolution, be issued on the terms that they are to be redeemed on such terms and in such manner as the company before the issue of the shares may, by special resolution, determine.

Lien

9. (*i*) The company shall have a first and paramount lien—

(*a*) On every share (not being a fully paid share), for all monies (whether presently payable or not) called, or payable at a fixed time, in respect of that share; and

(*b*) on all shares (not being fully paid shares) standing registered in the name of a single person, for all monies presently payable by him or his estate to the company:

Provided that the Board of directors may at any time declare any share to wholly or in part exempt from the provisions of this clause.

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(ii) The company's lien, if any, on a share shall extend to all dividend bonuses declared from time to time in respect of such shares.

10. The company may sell, in such manner as the Board thinks fit, any shares on which the company has a lien:

Provided that no sale shall be made—

(a) Unless a sum in respect of which the lien exists is presently payable; or

(b) until the expiration of fourteen days after a notice in writing stating and demanding payment of such part of the amount in respect of which the lien exists as is presently payable, has been given to the registered holder for the time being of the share or the person entitled thereto by reason of his death or insolvency.

11. (i) To give effect to any such sale, the Board may authorise some person to transfer the shares sold to the purchaser thereof.

(ii) The purchaser shall be registered as the holder of the shares comprised in any such transfer.

(iii) The purchaser shall not be bound to see to the application of the purchase money, nor shall his title to the shares be affected by any irregularity or invalidity in the proceedings in reference to the sale.

12. (i) The proceeds of the sale shall be received by the company and applied in payment of such part of the amount in respect of which the lien exists as is presently payable.

(ii) The residue, if any, shall, subject to a like lien for sums not presently payable as existed upon the shares before the sale, be paid to the person entitled to the shares at the date of the sale.

Calls on shares

13. (i) The Board may, from time to time, make calls upon the members in respect of any monies unpaid on their shares (whether on account of the nominal value of the shares or by way of premium) and not by the conditions of allotment thereof made payable at fixed times:

Provided that no call shall exceed one-fourth of the nominal value of the share or be payable at less than one month from the date fixed for the payment of the last preceding call

(ii) Each member shall, subject to receiving at least fourteen days' notice specifying the time or times and place of payment, pay to the company, at the time or times and place so specified, the amount called on his shares.

(iii) A call may be revoked or postponed at the discretion of the Board

14. A call shall be deemed to have been made at the time when the resolution of the Board authorising the call was passed and may be required to be paid by instalments.

15. The joint holders of a share shall be jointly and severally liable to pay all calls in respect thereof.

16. (i) If a sum called in respect of a share is not paid before or on the day appointed for payment thereof, the person from whom the sum is due shall pay interest thereon from the day appointed for payment thereof to the time of actual payment at ten per cent per annum or at such lower rate, if any, as the Board may determine.

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(ii) The Board shall be at liberty to waive payment of any such interest wholly or in part.

17. (i) Any sum which by the terms of issue of a share becomes payable on allotment or at any fixed date, whether on account of the nominal value of the share or by way of premium, shall, for the purposes of these regulations, be deemed to be a call duly made and payable on the date on which by the terms of issue such sum becomes payable.

(ii) In case of non-payment of such sum, all the relevant provisions of these regulations as to payment of interest and expenses, forfeiture or otherwise shall apply as if such sum had become payable by virtue of a call duly made and notified.

18. The Board—

(*a*) may, if it thinks fit, receive from any member willing to advance the same, all or any part of the monies uncalled and unpaid upon any shares held by him; and

(*b*) upon all or any of the monies so advanced, may (until the same would, but for such advance, become presently payable) pay interest at such rate not exceeding, unless the company in general meeting shall otherwise direct, twelve per cent Per annum, as may be agreed upon between the Board and the member paying the sum in advance.

Transfer of shares

19. (i) The instrument of transfer of any share in the company shall be executed by or on behalf of both the transferor and transferee.

(ii) The transferor shall be deemed to remain a holder of the share until the name of the transferee is entered in the register of members in respect thereof.

20. The Board may, subject to the right of appeal conferred by section 58 decline to register—

(*a*) the transfer of a share, not being a fully paid share, to a person of whom they do not approve; or

(*b*) any transfer of shares on which the company has a lien.

21. The Board may decline to recognise any instrument of transfer unless—

(a) the instrument of transfer is in the form as prescribed in rules made under sub-section (*1*) of section 56;

(*b*) the instrument of transfer is accompanied by the certificate of the shares to which it relates, and such other evidence as the Board may reasonably require to show the right of the transferor to make the transfer; and

(c) the instrument of transfer is in respect of only one class of shares.

22. On giving not less than seven days' previous notice in accordance with section 91 and rules made thereunder, the registration of transfers may be suspended at such times and for such periods as the Board may from time to time determine:
Provided that such registration shall not be suspended for more than thirty days at any one time or for more than forty-five days in the aggregate in any year.

Transmission of shares

23. (*i*) On the death of a member, the survivor or survivors where the member was a joint holder, and his nominee or nominees or legal representatives where he was a shareholder, shall be the only persons recognized by the company as having any title to his interest in the shares.

(*ii*) Nothing in clause (i) shall release the estate of a deceased joint holder from any liability in respect of any share which had been jointly held by him with other persons.

24. (*i*) Any person becoming entitled to a share in consequence of the death or insolvency of a member may, upon such evidence being produced as may from time to time properly be required by the Board and subject as hereinafter provided, elect, either—

(*a*) to be registered himself as holder of the share; or

(*b*) to make such transfer of the share as the deceased or insolvent member could have made.

(*ii*) The Board shall, in either case, have the same right to decline or suspend registration as it would have had, if the deceased or insolvent member had transferred the share before his death or insolvency.

25. (*i*) If the person so becoming entitled shall elect to be registered as holder of the share himself, he shall deliver or send to the company a notice in writing signed by him stating that he so elects.

(*ii*) If the person aforesaid shall elect to transfer the share, he shall testify his election by executing a transfer of the share.

(*iii*) All the limitations, restrictions and provisions of these regulations relating to the right to transfer and the registration of transfers of shares shall be applicable to any such notice or transfer as aforesaid as if the death or insolvency of the member had not occurred and the notice or transfer were a transfer signed by that member.

26. A person becoming entitled to a share by reason of the death or insolvency of the holder shall be entitled to the same dividends and other advantages to which he would be entitled if he were the registered holder of the share, except that he shall not, before being registered as a member in respect of the share, be entitled in respect of it to exercise any right conferred by membership in relation to meetings of the company:

Provided that the Board may, at any time, give notice requiring any such person to elect either to be registered himself or to transfer the share, and if the notice is not complied with within ninety days, the Board may thereafter withhold payment of all dividends, bonuses or other monies payable in respect of the share, until the requirements of the notice have complied with.

Forfeiture of shares

27. If a member fails to pay any call, or installment of a call, on the day appointed for payment thereof, the Board may, at any time thereafter during such time as any part of the call or installment remains unpaid, serve a notice on him requiring payment of so much of the call or installment as is unpaid, together with any interest which may have accrued.

28. The notice aforesaid shall—

(*a*) name a further day (not being earlier than the expiry of fourteen days from the date of service of the notice) on or before which the payment required by the notice is to be made; and

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(*b*) state that, in the event of non-payment on or before the day so named, the shares in respect of which the call was made shall be liable to be forfeited.

29. If the requirements of any such notice as aforesaid are not complied with, any share in respect of which the notice has been given may, at any time thereafter, before the payment required by the notice has been made, be forfeited by a resolution of the Board to that effect

30. (i) A forfeited share may be sold or otherwise disposed of on such terms and in such manner as the Board thinks fit.

(ii) At any time before a sale or disposal as aforesaid, the Board may cancel the forfeiture on such terms as it thinks fit.

31. (i) A person whose shares have been forfeited shall cease to be a member in respect of the forfeited shares, but shall, notwithstanding the forfeiture, remain liable to pay to the company all monies which, at the date of forfeiture, were presently payable by him to the company in respect of the shares.

(ii) The liability of such person shall cease if and when the company shall have received payment in full of all such monies in respect of the shares.

32. (i) A duly verified declaration in writing that the declarant is a director, the manager or the secretary, of the company, and that a share in the company has been duly forfeited on a date stated in the declaration, shall be conclusive evidence of the facts therein stated as against all persons claiming to be entitled to the share;

(ii) The company may receive the consideration, if any, given for the share on any sale or disposal thereof and may execute a transfer of the share in favour of the person to whom the share is sold or disposed of;

(iii) The transferee shall thereupon be registered as the holder of the share; and

(iv) The transferee shall not be bound to see to the application of the purchase money, if any, nor shall his title to the share be affected by any irregularity or invalidity in the proceedings in reference to the forfeiture, sale or disposal of the share.

33. The provisions of these regulations as to forfeiture shall apply in the case of nonpayment of any sum which, by the terms of issue of a share, becomes payable at a fixed time, whether on account of the nominal value of the share or by way of premium, as if the same had been payable by virtue of a call duly made and notified.

Alteration of capital

34. The company may, from time to time, by ordinary resolution increase the share capital by such sum, to be divided into shares of such amount, as may be specified in the resolution.

35. Subject to the provisions of section 61, the company may, by ordinary resolution,—

(*a*) consolidate and divide all or any of its share capital into shares of larger amount than its existing shares;

(*b*) convert all or any of its fully paid-up shares into stock, and reconvert that stock into fully paid-up shares of any denomination;

(c) sub-divide its existing shares or any of them into shares of smaller amount than is fixed by the memorandum;

(d) cancel any shares which, at the date of the passing of the resolution, have not been taken or agreed to be taken by any person.

36. Where shares are converted into stock,—

(a) the holders of stock may transfer the same or any part thereof in the same manner as, and subject to the same regulations under which, the shares from which the stock arose might before the conversion have been transferred, or as near thereto as circumstances admit:

Provided that the Board may, from time to time, fix the minimum amount of stock transferable, so, however, that such minimum shall not exceed the nominal amount of the shares from which the stock arose.

(b) the holders of stock shall, according to the amount of stock held by them, have the same rights, privileges and advantages as regards dividends, voting at meetings of the company, and other matters, as if they held the shares from which the stock arose; but no such privilege or advantage (except participation in the dividends and profits of the company and in the assets on winding up) shall be conferred by an amount of stock which would not, if existing in shares, have conferred that privilege or advantage.

(c) such of the regulations of the company as are applicable to paid-up shares shall apply to stock and the words "share" and "shareholder" in those regulations shall include "stock" and "stock-holder" respectively.

37. The company may, by special resolution, reduce in any manner and with, and subject to, any incident authorised and consent required by law,—

(a) its share capital;

(b) any capital redemption reserve account; or

(c) any share premium account.

Capitalisation of profits

38. (1) The company in general meeting may, upon the recommendation of the Board, resolve—

(a) that it is desirable to capitalise any part of the amount for the time being standing to the credit of any of the company's reserve accounts, or to the credit of the profit and loss account, or otherwise available for distribution; and

(b) that such sum be accordingly set free for distribution in the manner specified in clause (ii) amongst the members who would have been entitled thereto, if distributed by way of dividend and in the same proportions.

(ii) The sum aforesaid shall not be paid in cash but shall be applied, subject to the provision contained in clause (iii), either in or towards—

(A) paying up any amounts for the time being unpaid on any shares held by such members respectively;

(*B*) paying up in full, unissued shares of the company to be allotted and distributed, credited as fully paid-up, to and amongst such members in the proportions aforesaid;

(*C*) partly in the way specified in sub-clause (*A*) and partly in that specified in sub-clause (*B*);

(*D*) A securities premium account and a capital redemption reserve account may, for the purposes of this regulation, be applied in the paying up of unissued shares to be issued to members of the company as fully paid bonus shares;

(*E*) The Board shall give effect to the resolution passed by the company in pursuance of this regulation.

39. (*i*) Whenever such a resolution as aforesaid shall have been passed, the Board shall—

(*a*) make all appropriations and applications of the undivided profits resolved to be capitalised thereby, and all allotments and issues of fully paid shares if any; and

(*b*) generally do all acts and things required to give effect thereto.

(*ii*) The Board shall have power—

(*a*) to make such provisions, by the issue of fractional certificates or by payment in cash or otherwise as it thinks fit, for the case of shares becoming distributable in fractions; and

(*b*) to authorise any person to enter, on behalf of all the members entitled thereto, into an agreement with the company providing for the allotment to them respectively, credited as fully paid-up, of any further shares to which they may be entitled upon such capitalisation, or as the case may require, for the payment by the company on their behalf, by the application thereto of their respective proportions of profits resolved to be capitalised, of the amount or any part of the amounts remaining unpaid on their existing shares;

(*iii*) Any agreement made under such authority shall be effective and binding on such members.

Buy-back of shares

40. Notwithstanding anything contained in these articles but subject to the provisions of sections 68 to 70 and any other applicable provision of the Act or any other law for the time being in force, the company may purchase its own shares or other specified securities.

General meetings

41. All general meetings other than annual general meeting shall be called extraordinary general meeting.

42. (*i*) The Board may, whenever it thinks fit, call an extraordinary general meeting.

(*ii*) If at any time directors capable of acting who are sufficient in number to form a quorum are not within India, any director or any two members of the company may call an extraordinary general meeting in the same manner, as nearly as possible, as that in which such a meeting may be called by the Board.

Proceedings at general meetings

43. (*i*) No business shall be transacted at any general meeting unless a quorum of members is present at the time when the meeting proceeds to business.

(ii) Save as otherwise provided herein, the quorum for the general meetings shall be as provided in section 103.

44. The chairperson, if any, of the Board shall preside as Chairperson at every general meeting of the company.

45. If there is no such Chairperson, or if he is not present within fifteen minutes after the time appointed for holding the meeting, or is unwilling to act as chairperson of the meeting, the directors present shall elect one of their members to be Chairperson of the meeting.

46. If at any meeting no director is willing to act as Chairperson or if no director is present within fifteen minutes after the time appointed for holding the meeting, the members present shall choose one of their members to be Chairperson of the meeting.

Adjournment of meeting

47. (i) The Chairperson may, with the consent of any meeting at which a quorum is present, and shall, if so directed by the meeting, adjourn the meeting from time to time and from place to place.

(ii) No business shall be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment took place.

(iii) When a meeting is adjourned for thirty days or more, notice of the adjourned meeting shall be given as in the case of an original meeting.

(iv) Save as aforesaid, and as provided in section 103 of the Act, it shall not be necessary to give any notice of an adjournment or of the business to be transacted at an adjourned meeting.

Voting rights

48. Subject to any rights or restrictions for the time being attached to any class or classes of shares,—

(a) on a show of hands, every member present in person shall have one vote; and

(b) on a poll, the voting rights of members shall be in proportion to his share in the paid-up equity share capital of the company.

49. A member may exercise his vote at a meeting by electronic means in accordance with section 108 and shall vote only once.

50. (i) In the case of joint holders, the vote of the senior who tenders a vote, whether in person or by proxy, shall be accepted to the exclusion of the votes of the other joint holders.

(ii) For this purpose, seniority shall be determined by the order in which the names stand in the register of members.

51. A member of unsound mind, or in respect of whom an order has been made by any court having jurisdiction in lunacy, may vote, whether on a show of hands or on a poll, by his committee or other legal guardian, and any such committee or guardian may, on a poll, vote by proxy.

52. Any business other than that upon which a poll has been demanded may be proceeded with, pending the taking of the poll.

53. No member shall be entitled to vote at any general meeting unless all calls or other sums presently payable by him in respect of shares in the company have been paid.

54. (i) No objection shall be raised to the qualification of any voter except at the meeting or adjourned meeting at which the vote objected to is given or tendered, and every vote not disallowed at such meeting shall be valid for all purposes.

(ii) Any such objection made in due time shall be referred to the Chairperson of the meeting, whose decision shall be final and conclusive.

Proxy

55. The instrument appointing a proxy and the power-of-attorney or other authority, if any, under which it is signed or a notarised copy of that power or authority, shall be deposited at the registered office of the company not less than 48 hours before the time for holding the meeting or adjourned meeting at which the person named in the instrument proposes to vote, or, in the case of a poll, not less than 24 hours before the time appointed for the taking of the poll; and in default the instrument of proxy shall not be treated as valid.

56. An instrument appointing a proxy shall be in the form as prescribed in the rules made under section 105.

57. A vote given in accordance with the terms of an instrument of proxy shall be valid, notwithstanding the previous death or insanity of the principal or the revocation of the proxy or of the authority under which the proxy was executed, or the transfer of the shares in respect of which the proxy is given:

Provided that no intimation in writing of such death, insanity, revocation or transfer shall have been received by the company at its office before the commencement of the meeting or adjourned meeting at which the proxy is used.

Board of Directors

58. The number of the directors and the names of the first directors shall be determined in writing by the subscribers of the memorandum or a majority of them.
(a) Devender Kumar
(b) Suman Kumari

59. (i) The remuneration of the directors shall, in so far as it consists of a monthly payment, be deemed to accrue from day-to-day.

(ii) In addition to the remuneration payable to them in pursuance of the Act, the directors may be paid all travelling, hotel and other expenses properly incurred by them—

(a) in attending and returning from meetings of the Board of Directors or any committee thereof or general meetings of the company; or

(b) in connection with the business of the company.

60. The Board may pay all expenses incurred in getting up and registering the company.

61. The company may exercise the powers conferred on it by section 88 with regard to the keeping of a foreign register; and the Board may (subject to the provisions of that (section) make and vary such regulations as it may thinks fit respecting the keeping of any such register.

62. All cheques, promissory notes, drafts, *hundis*, bills of exchange and other negotiable instruments, and all receipts for monies paid to the company, shall be signed, drawn, accepted, endorsed, or otherwise executed, as the case may be, by such person and in such manner as the Board shall from time to time by resolution determine.

63. Every director present at any meeting of the Board or of a committee thereof shall sign his name in a book to be kept for that purpose.

64. (*i*) Subject to the provisions of section 149, the Board shall have power at any time, and from time to time, to appoint a person as an additional director, provided the number of the directors and additional directors together shall not at any time exceed the maximum strength fixed for the Board by the articles.

(*ii*) Such person shall hold office only up to the date of the next annual general meeting of the company but shall be eligible for appointment by the company as a director at that meeting subject to the provisions of the Act.

Proceedings of the Board

65. (*i*) The Board of Directors may meet for the conduct of business, adjourn and otherwise regulate its meetings, as it thinks fit.

(*ii*) A director may, and the manager or secretary on the requisition of a director shall, at any time, summon a meeting of the Board.

66. (*i*) Save as otherwise expressly provided in the Act, questions arising at any meeting of the Board shall be decided by a majority of votes.

(*ii*) In case of an equality of votes, the Chairperson of the Board, if any, shall have a second or casting vote.

67. The continuing directors may act notwithstanding any vacancy in the Board; but, if and so long as their number is reduced below the quorum fixed by the Act for a meeting of the Board, the continuing directors or director may act for the purpose of increasing the number of directors to that fixed for the quorum, or of summoning a general meeting of the company, but for no other purpose.

68. (*i*) The Board may elect a Chairperson of its meetings and determine the period for which he is to hold office.

(*ii*) If no such Chairperson is elected, or if at any meeting the Chairperson is not present within five minutes after the time appointed for holding the meeting, the directors present may choose one of their number to be Chairperson of the meeting.

69. (*i*) The Board may, subject to the provisions of the Act, delegate any of its powers to committees consisting of such member or members of its body as it thinks fit.

(*ii*) Any committee so formed shall, in the exercise of the powers so delegated, conform to any regulations that may be imposed on it by the Board.

70. (*i*) A committee may elect a Chairperson of its meetings.

(ii) If no such Chairperson is elected, or if at any meeting the Chairperson is not present within five minutes after the time appointed for holding the meeting, the members present may choose one of their members to be Chairperson of the meeting.

71. (i) A committee may meet and adjourn as it thinks fit.

(ii) Questions arising at any meeting of a committee shall be determined by a majority of votes of the members present, and in case of an equality of votes, the Chairperson shall have a second or casting vote.

72. All acts done in any meeting of the Board or of a committee thereof or by any person acting as a director, shall, notwithstanding that it may be afterwards discovered that there was some defect in the appointment of any one or more of such directors or of any person acting as aforesaid, or that they or any of them were disqualified, be as valid as if every such director or such person had been duly appointed and was qualified to be a director.

73. Save as otherwise expressly provided in the Act, a resolution in writing, signed by all the members of the Board or of a committee thereof, for the time being entitled to receive notice of a meeting of the Board or committee, shall be valid and effective as if it had been passed at a meeting of the Board or committee, duly convened and held.

Chief Executive Officer, Manager, Company Secretary or Chief Financial Officer

74. Subject to the provisions of the Act,—

(i) A chief executive officer, manager, company secretary or chief financial officer may be appointed by the Board for such term, at such remuneration and upon such conditions as it may thinks fit; and any chief executive officer, manager, company secretary or chief financial officer so appointed may be removed by means of a resolution of the Board;

(ii) A director may be appointed as chief executive officer, manager, company secretary or chief financial officer.

75. A provision of the Act or these regulations requiring or authorising a thing to be done by or to a director and chief executive officer, manager, company secretary or chief financial officer shall not be satisfied by its being done by or to the same person acting both as director and as, or in place of, chief executive officer, manager, company secretary or chief financial officer.

The Seal

76. (i) The Board shall provide for the safe custody of the seal.

(ii) The seal of the company shall not be affixed to any instrument except by the authority of a resolution of the Board or of a committee of the Board authorised by it in that behalf, and except in the presence of at least two directors and of the secretary or such other person as the Board may appoint for the purpose; and those two directors and the secretary or other person aforesaid shall sign every instrument to which the seal of the company is so affixed in their presence.

Dividends and Reserve

77. The company in general meeting may declare dividends, but no dividend shall exceed the amount recommended by the Board.

78. Subject to the provisions of section 123, the Board may from time to time pay to the members such interim dividends as appear to it to be justified by the profits of the company.

79. (*i*) The Board may, before recommending any dividend, set aside out of the profits of the company such sums as it thinks fit as a reserve or reserves which shall, at the discretion of the Board, be applicable for any purpose to which the profits of the company may be properly applied, including provision for meeting contingencies or for equalizing dividends; and pending such application, may, at the like discretion, either be employed in the business of the company or be invested in such investments (other than shares of the company) as the Board may, from time to time, thinks fit.

(*ii*) The Board may also carry forward any profits which it may consider necessary not to divide, without setting them aside as a reserve.

80. (*i*) Subject to the rights of persons, if any, entitled to shares with special rights as to dividends, all dividends shall be declared and paid according to the amounts paid or credited as paid on the shares in respect whereof the dividend is paid, but if and so long as nothing is paid upon any of the shares in the company, dividends may be declared and paid according to the amounts of the shares.

(*ii*) No amount paid or credited as paid on a share in advance of calls shall be treated for the purposes of this regulation as paid on the share.

(*iii*) All dividends shall be apportioned and paid proportionately to the amounts paid or credited as paid on the shares during any portion or portions of the period in respect of which the dividend is paid; but if any share is issued on terms providing that it shall rank for dividend as from a particular date such share shall rank for dividend accordingly.

81. The Board may deduct from any dividend payable to any member all sums of money, if any, presently payable by him to the company on account of calls or otherwise in relation to the shares of the company.

82. (*i*) Any dividend, interest or other monies payable in cash in respect of shares maybe paid by cheque or warrant sent through the post directed to the registered address of the holder or, in the case of joint holders, to the registered address of that one of the joint holders who is first named on the register of members, or to such person and to such address as the holder or joint holders may in writing direct.

(*ii*) Every such cheque or warrant shall be made payable to the order of the person to whom it is sent.

83. Any one of two or more joint holders of a share may give effective receipts for any dividends, bonuses or other monies payable in respect of such share.

84. Notice of any dividend that may have been declared shall be given to the persons entitled to share therein in the manner mentioned in the Act.

85. No dividend shall bear interest against the company.

Accounts

86. (*i*) The Board shall from time to time determine whether and to what extent and at what times and places and under what conditions or regulations, the accounts and books of the company, or any of them, shall be open to the inspection of members not being directors.

(ii) No member (not being a director) shall have any right of inspecting any account or book or document of the company except as conferred by law or authorised by the Board or by the company in general meeting.

Winding up

87. Subject to the provisions of Chapter XX of the Act and rules made thereunder—

(i) If the company shall be wound up, the liquidator may, with the sanction of a special resolution of the company and any other sanction required by the Act, divide amongst the members, in specie or kind, the whole or any part of the assets of the company, whether they shall consist of property of the same kind or not.

(ii) For the purpose aforesaid, the liquidator may set such value as he deems fair upon any property to be divided as aforesaid and may determine how such division shall be carried out as between the members or different classes of members.

(iii) The liquidator may, with the like sanction, vest the whole or any part of such assets in trustees upon such trusts for the benefit of the contributories if he considers necessary, but so that no member shall be compelled to accept any shares or other securities whereon there is any liability.

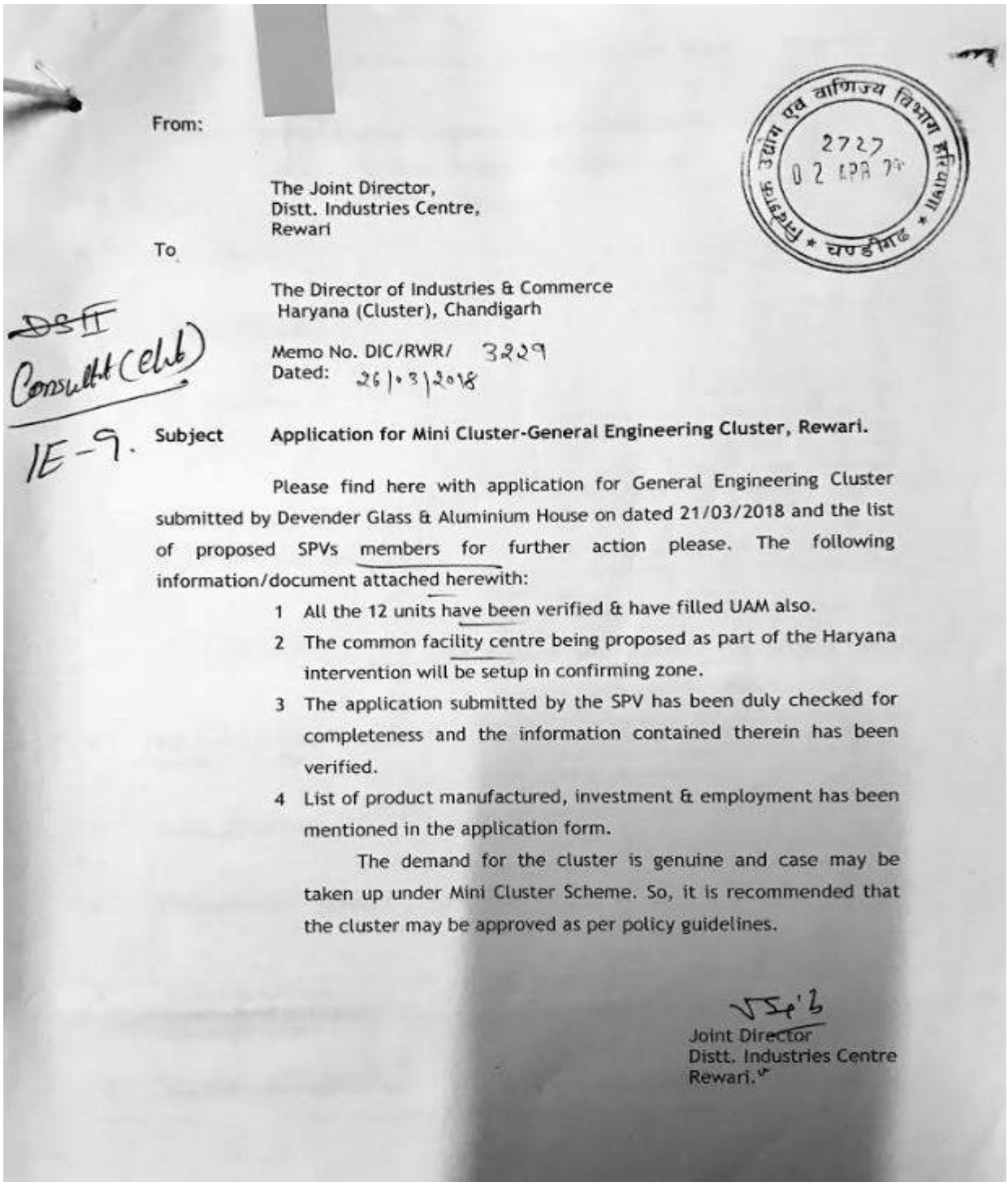
Indemnity

88. Every officer of the company shall be indemnified out of the assets of the company against any liability incurred by him in defending any proceedings, whether civil or criminal, in which judgment is given in his favour or in which he is acquitted or in which relief is granted to him by the court or the Tribunal.

We several person whose name, address and description are subscribed below are desirous of being formed into a company, in pursuance of this **Memorandum of Association** and we respectively agree to take the number of shares in the capital of company set opposite to our respective names:-

S.No.	Names, Address, Description & occupation of the Subscriber	No. of Shares taken by each Subscriber	Signature	Signature, Name, Address, Description and occupation of the witness
01	Sh. Devender Kumar S/o Shri Bishamber Dayal R/o H.NO. 717/3, Saini Colony, NRP Bass Road, Dharuhera, Rewari, Haryana Description:Director Occupation : Business	5000/- equity shares of Rs. 10/- each	Sd/-	Sd/- The signature of the subscriber are attested below who signed before me. CA. Gaurav Gupta, FCA S/o Sh. Late Parmanand Gupta R/o H.No. 36, Ward-3, Dharuhera Distt-Rewari, Haryana-123106
02	Smt Suman Kumari W/o Sandeep Kumar R/o Vill Sureti, Teh Mahenderhgarh, Distt Mohindergarh, Haryana Description:Director Occupation : Home Worker	5000/- equity shares of Rs. 10/- each	Sd/-	
		10000/- equity shares of Rs. 10/- each.		

3. Verification of units by DIC, Rewari



From:

The Joint Director,
Distt. Industries Centre,
Rewari

To

The Director of Industries & Commerce
Haryana (Cluster), Chandigarh

~~DSII~~
Consultt (club)
IE-9.

Memo No. DIC/RWR/ 3229
Dated: 26/03/2018

Subject **Application for Mini Cluster-General Engineering Cluster, Rewari.**

Please find here with application for General Engineering Cluster submitted by Devender Glass & Aluminium House on dated 21/03/2018 and the list of proposed SPVs members for further action please. The following information/document attached herewith:

1 All the 12 units have been verified & have filled UAM also.
2 The common facility centre being proposed as part of the Haryana intervention will be setup in confirming zone.
3 The application submitted by the SPV has been duly checked for completeness and the information contained therein has been verified.
4 List of product manufactured, investment & employment has been mentioned in the application form.

The demand for the cluster is genuine and case may be taken up under Mini Cluster Scheme. So, it is recommended that the cluster may be approved as per policy guidelines.

Joint Director
Distt. Industries Centre
Rewari.

List of SPV Members for Engineering Products Cluster, Dharuhera (Rewari)

S. N.	Contact Person	Company/Firm/Unit/Promoter Name	Contact No.	Address of Unit	UAM No.	Products
1	Suman Kumari	Czone Engineering Solution	9812973000	71/12, HUDA industrial area, Dharuhera, Rewari	HR15B0000793	Plastic product for stone crusher, Wire mesh conveyer plastic roller plastic seal set
2	Ashwani Sharma	Sharma Industries	9813513521	Jeldar market, Dharuhera	HR15A0000787	Plastic spare parts robotic machines, tie rod, moulding machines parts
3	Sher Singh	[illegible] Engg. Works	[illegible]16454347	Near Hero university, Dharuhera	HR15A0000790	Plastic products two plastic gears plastic mould, plastic conveyor wheel
4	Devender Kumar	Devender Glass & Aluminium House	8199958431	NRP Bass Road opposite Water Supply, Dharuhera, Rewari	HR15A0000787	Plastic frames, plastic handle, sliding plastic locking arrangement, plastic wheel, plastic beading and accessories, Glass& aluminium accessories making
5	Krishan kumar	Neelam Glass &Aluminium House	9996042646	1, Nandrampur Bass Road, Dharuhera, Rewari	HR15A0000780	Door window plastic hardware, plastic wheel, handle pivots plastic beading accessories
6	Parmod	Prime Contractor & Engineers PVT LTD	9812919345	Near Water supply, Dharuhera, Rewari	HR15A0000792	Decorative plastic material, PVC channel for ceiling, modern plastic panel work, Construction metal work, screw fasteners for shed
7	Dinesh Kumar	NDC Solutions	9991274710	71- A, Industrial Area Dharuhera	HR15A0000794	Plastic moulding accessories beadings & components
8	Manoj Kumar	Shree Glass & Aluminium Works	8901367711	Garhi Bolani Road, Shakti Nagar Rewari	HR15B0000788	Plastic parts, Fabrication, Glass doors and frames with plastic (UPVC) beading door windows
9	Pardeep kumar	Jiya glass aluminium & steel work	9896976490	Gol chhakar Delhi gate Rewari Haryana 123401	HR15A0000804	Door window plastic hardware, plastic wheel, handle pivots plastic beading accessories
10	Pawan Kaushik	ND Print and Pack	7988070533	Chand colony, Bass road, Dharuhera	HR18A0000[illegible]	Plastic boxes & Plastic moulding parts
11	Ashok Kumar	Ashok Engineering	9911407476	Plot No. 234 Sector-6 Manesar	HR05A0006[illegible]	Manufacturing of Plastic trolley & plastic products for automobiles
12	Deepak	Aaryan Packaging Industries	9728120314	Plot 107, Sec-6 IMT	HR05B0006[illegible]	Plastic products like RO cell, water purifier parts

4. Building Availability Proof

RENT AGREEMENT

This Rent Agreement is made on this 23rd day of May of 2018 between Mr. Krishan Kumar S/o Sh. Bishamber Dayal Saini R/o Dharuhera, Distt - Rewari (hereinafter called the Lesser/landlord of one part) and Smt. Suman Kumari & Mr. Devender Kumar Proposed Director of Proposed Company M/s Czone Testers & Engimech Pvt. Ltd. Situated at (hereinafter called the Lessee/Tenant of the other part).

The expression Lessor and Lessee will mean and include their heirs, successors, executors, administrators and assigns. Whereas the Lessor is the owner and in possession of property situated at **71/12 Industrial Area Dharuhera, Distt- Rewari (Haryana) - 123106** hereinafter referred to as the demised premises and is desirous of letting out the said to the lessee and the lessee is ready and willing to take the same on rent from then Lessor on the terms and conditions herein contained. Now, therefore, it is mutually agreed between the parties as under:

1. That the Lesser has given on rent to the Lessee Property at the rate of 30000/- p.m. rent payable on the 7th of every following month by the lessee.
2. That the lease shall be for one year and stand renewed automatically thereafter at the sole discretion of the Lessee and the Lessor shall have no option to cancel the lease.
3. That the Lessor has handed over the actual and physical possession of the demised premises to the Lessee and the Lessee shall always enjoy the peaceful and uninterrupted possession of the demised premises.
4. That the landlord shall have no objection if the tenant makes any additions or alterations in the existing Property.
5. All maintenance and repair charges would be borne by the tenant. The lessee is authorized/not authorized to sub-let the demised premises to any person of his/her choice.
6. That the Lessee shall be responsible and liable for the water/electricity charges and other dues in respect of the said Property during the tenancy period.

In witnesses whereof the Lessor and the Lessee have put in their respective signatures to his Agreement on the date and year first above written in the presence of the following witnesses.

Witnesses:

1.

2.

LESSOR

LESSEE

ATTESTED

M.S. SHARMA
NOTARY PUBLIC
REWARI

5. Machinery Quotations

6000 Kgf (60 KN) Electrodynamic Vibration Test System with Environmental Chamber	PROPOSAL	Doc. No.	PD-1819-CR-1771A
		Date	July 20, 2018

Certifications	Pacific Dynamics	
	Works & Correspondence Address	***Regd. Office***
	Khasra No. 986M & 987 Salempur Rajputan Industrial Area Roorkee - 247667 (Uttarakhand), India	**149, Chandrapuri Roorkee - 247667 (Uttarakhand) India**

GSTIN No.: 05AAOFP1835G1Z8 PAN No.: AAOFP1835G TAN No. MRTP03823B IEC No.: 6113000494

Document Title

Proposal for Manufacturing and Supply of
6000 Kgf (60kN) Electrodynamic Vibration Test System with Environmental Chamber for Integrated Operation

For The Kind Attention of: Mr. Sandeep Choudhary

CZONE Testers and ENGIMECH Pvt. Ltd.
Plot No. 71/12, HUDA Industrial Area
Dharuhera, Rewari- 123 106 (Haryana)

History:

2	20-07-2018	PD-1819-CR-1771A	Brief Proposal-Revised	H K Verma
1	10-07-2018	PD-1819-CR-1771	Brief Proposal	H K Verma
S.N.	Date	Quote No.	Subject	Sender

Mob: +91 9837391375/9012345127/8410455232 **Phone/Fax:** +91 1332-268848
Email: info@pacific-dynamics.com services@pacific-dynamics.com **Web:** www.pacific-dynamics.com
1

6000 Kgf (60 KN) Electrodynamic Vibration Test System with Environmental Chamber	PROPOSAL	Doc. No.	PD-1819-CR-1771A
		Date	July 20, 2018

Section-01: Synopsis

Ref: Our discussion today in the subject matter.

Dear Sir,

We thank you for your trust in our Environmental testing solutions. As per the scope, we are pleased to furnish herewith our techno-commercial proposal for supply of **6000 Kgf Electrodynamic Vibration Test system and Environmental Chamber** to facilitate vibration testing with Integration operation.

About Us:

We take this opportunity to introduce us as an established **OEM** in design and manufacturing of complete range of *Electrodynamic Vibration Test System, Shock & Bump Test Machine, Customized Test Rig (SPMs) and Environmental Test Chamber(s) meeting all* ***MIL, IEC, ISO, IS, JSS, JIS, Korean, European & American*** *test standards and Customer Specific application requirement.*

With more than 60+ years combined experience of the team at Pacific Dynamics in design, manufacturing, installation, maintenance and application support in the field of environmental testing, we are rapidly expanding our customer base which itself endorses our commitment towards reliable product quality and services. Our product range mainly includes the followings:-

1) Electrodynamic shaker system, power amplifier, vibration controller, sensors and software
2) Horizontal slip Table and Head Expander
3) Bump and Shock machine
4) Climatic Chamber (Hot, Cold, Humidity) with/ without Vibration Integration
5) Rain, Dust and Salt Spray chambers
6) Variable/ Fixed vibration table
7) Vibration Test Setup for Damper Testing
8) Vibration Test Setup for Elastomer Testing
9) Seismic Simulation
10) Customized Test Equipment and Durability Test Rigs (SPMs)
11) Pneumatic/ Servo Electric/ Servo Hydraulic Actuator based Test Setups

We are also taking up **up-gradation, modernization, repair** and **maintenance** of old equipment (any make) including entering into annual maintenance contract so as to get optimum utilization of these equipment.

Looking forward to have the pleasure of serving your esteemed organization with our outstanding products, services and 24x7 technical support.

Best regards

for Pacific Dynamics

H K Verma
Director (Marketing)
Mob: +91 98 373 91375

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6000 Kgf (60 KN) Electrodynamic Vibration Test System with Environmental Chamber	PROPOSAL	Doc. No.	PD-1819-CR-1771A
		Date	July 20, 2018

Section-02: Deliverables & Commercials

2.1 Deliverables and Price

S.N.	Description	Model	Qty.	Price (Rs.)
	Manufacturing, Assembly, Testing, Supply and Installation of Vibration Test System with Environmental Chamber for Combined Testing. It consists of the followings:-		**01 Set**	**HSN Code 90318000**
01.	**6000 Kgf (60KN) Electrodynamic Vibration Test System**			
1.1	**Electrodynamic Shaker** ➢ 6000 KgF (60 KN) Peak Sine Force ➢ 6000 KgF (60 KN) rms Random Force ➢ 12000 KgF (120 KN) Peak Shock Force	PDS-440	01 No.	**75,00,000.00**
1.2	**Air cooling system** (Centrifugal Blower) with 8m Hose	PDCB-440	01 No.	
1.3	**Digital Power Amplifier** ➢ Switching Power Amplifier technology ➢ Built-in field supply ➢ Armature Auto Centering Module	PDA-64K	01 No.	
	Logic and Protection Unit	PDLPU-01	01 No.	
1.4	**Piezo-Electric Accelerometer (Sensor)** ➢ ICP/ IEPE type, Titanium Housing ➢ Nominal sensitivity (10 mV/g) ➢ Single axis	Dytran (USA)	04 Nos.	
1.5	**Accelerometer Cable** ➢ Low-noise type ➢ Microdot to BNC cable ➢ Length (10m)	Dytran (USA)	04 Nos.	
1.6	**Vibration Control System** **Hardware:** ➢ Design : Desktop Module ➢ Connectivity to PC: USB 2.0 ➢ Operating System Compatibility: Windows XP/7/8/10 ➢ Input channel : 4 (Simultaneous) ➢ Output channel: 2 (Servo & COLA) ➢ Type of sensors : ICP/IEPE, Voltage **Application Software:** ➢ Sine, RSTD, Random (3200 lines), Shock, Notching, Re-calibration, Digital I/O	VT-9004 (Econ make)	01 Set	
1.7	**Head Expander (Circular)** ➢ Platform :1000mm Dia ➢ Fitment: direct on shaker armature ➢ UUT mounting: SS Inserts at 100mm x 100mm matrix ➢ Payload Capacity: 500 Kg on HE	PDHC-10	01 No.	
1.8	**Combo Base Horizontal Slip Table** ➢ Platform : 1000mm x 1000mm ➢ Coupling : Drive bar between HST and shaker armature ➢ Mounting : SS Inserts at 100mm x 100mm matrix ➢ Payload Capacity: 500 Kg on HST Bed	PDST-1010	01 No.	
02.	**Environmental Test Chamber**			
2.1	➢ Internal Size: 1.2m x 1.2m x1.2m ➢ Temperature Range: -40°C to + 180°C ➢ Ramp Rate: 1°C/min. ➢ Control Accuracy: ±1°C ➢ Humidity: 20 to 95%RH ± 3% ➢ Chamber Controller: PLC based with Touch Screen ➢ Horizontal Movement for Integration with Shaker	PDEC-121212	01 no.	

03.	**Shaker-Chamber Vertical Integration Accessories for Combined Operation**	PDSCI-01	01 set	
04.	**Tools and Accessories for fitment**	Std.	01 Set	
05.	**System Interconnection Cables (10m length)**	Std.	01 Set	
06.	**List of General Spares Supplied with the system (as listed under Section-4)**	Std.	01 Set	
07.	**Documentation** • Technical, Operation and Maintenance manual with all mechanical drawings & electrical ckt diagram • Calibration Certificate (Traceable to NIST/NPL/ NABL Accredited Lab) of all sensors	Hardcopy and Softcopy	01 Set	
08.	**Installation, Commissioning, Integration with Chamber, Operation and Maintenance Training**	Std.	01 Job	**60,000.00**

2.2 Special Notes:

1. PC/Laptop with Windows XP/7/8/10, MS Office and Printer has to be provided by User for interfacing of Vibration Control system.
2. The offered system meets the environmental testing applications as per various international and national test standards such as MIL-810G, IEC, BIS, JIS, ISO, JAS, IS etc.
3. The system is **CE Compliant** for safety norms and manufactured as per **ISO 9001:2008** certified processes.
4. The system is calibrated with validity for one year which has traceability to NABL.
5. We as OEM guarantee for min. 10 years after-sales-support including AMC.
6. Service and application support shall be extended free-of-cost during warranty period under agreed warranty conditions. Thereafter, the system may be maintained as per mutually agreed terms in the following manner-
   - **AMC (Comprehensive- with Spares)**
     - Preventive Maint. Visits (2), Break Down Visits (Unlimited), Annual Calibration
     - Training and Application support 24x7 by Phone/ Email/ Skype, Team Viewer etc.
   - **AMC (Non-comprehensive, without Spares)**
     - Preventive Maint. Visits (2), Break Down Visits (Unlimited), Annual Calibration
     - Training and Application support 24x7 by Phone/ Email/ Skype, Team Viewer etc.
   - **Call Basis–** As mutually agreed.

2.3 Commercial Terms of Business:

1.	Price	Ex-works
2.	IGST	Additional @18%
3.	Packing, Transportation & Transit Insurance	Additional @4% on quoted price
4.	Validity of Offer	60 days from the date of this proposal
5.	Delivery	Within 4-6 months
6.	Payment Terms	1. 50% advance with purchase order. 2. 40%+GST against Pre-dispatch Inspection before dispatch. 3. Balance 10% after commissioning within 1-week.
7.	Standard Warranty	12-months after acceptance at your site or 15-months from the date of dispatch whichever is earlier.

6000 Kgf (60 KN) Electrodynamic Vibration Test System with Environmental Chamber	PROPOSAL	Doc. No.	PD-1819-CR-1771A
		Date	July 20, 2018

2.4 Registration & Banking Details:

	Registrations	
1.	GSTIN No.	05AAOFP1835G1Z8
2.	PAN No.	AAOFP1835G
3.	TAN No.	MRTP03823B
4.	MSME No.	050131102714
5.	IEC Code	6113000494
	Banking	
1.	Bank Name	Indian Overseas Bank, Railway Road, Roorkee
2.	Account Name	Pacific Dynamics
3.	A/c No.	143802000001285
4.	IFS Code	IOBA0001438

Geo Informatics Consultants Pvt. Ltd.
Regd. & Sales Office: Flat No. A-36, Vikalp Appt. Plot No. 92, I.P. Extn. Patparganj, Delhi-110092
Admin. Office: Plot No. 19, 1st & 2nd Floor, Sector-14, Kaushambi,Ghaziabad-201010 (UP)
Phone: +91 120 2775115, 4160683, Fax: +91 120 2775116
E-mail: gic@gicpl.com Web:www.gicpl.com
CIN No: U74899DL1995PTC066838

Budgetary Techno-Commercial Proposal for Micro-Vu, USA make Semi-Automatic VMM (Model: Sol-312 HC LWD)			
For " CZONE TESTERS AND ENGIMECH PVT LTD. , Gurgaon"			
Ref No.:- GIC18-19/Micro Vu/VMM/North			*Date: July 21, 2018*
S. No.	***Descriptionand Technical Configuration***	***Unit Price in INR***	***Total Price in INR (without Custom Duty & Taxes under High Sea Sale Agreement)***
1	Semi Automatic, Fully programmable, Motorized zoom with High End Metrology Software :: Sol 312 HC LWD Color Semi Automatic Vision Measurement System (M2420113) Capacity (X x Y x Z): 315 x 315 x 250 mm Video: Color XYZ Resolutiion : 0.1 Microns XY Accuracy: 4.5 + L/150 Microns Z Accuracy: 3.3 + L/75 Microns Optical Working Distance: Long Working Distance (For Detailed Technical Specification refer Catalogue)	INR	1482250
2	Advance Lightening, Multi Ring, Multisensor, LED lightening- Surface, profile and Axial :: Macro Ringlight assembly 1X white hot swap nicha cool white NSPW 500D LED No Spacer (3E1R-295) (C7150191)	INR	79,520
3	Optics Calibration Tool for in-house calibration (for full Optics Callibration)		15000
4	Light Calibration Tool for in-house calibration	INR	23500
	Inspec Metrology Software ::		
5	Inspec Metrology High End Measurement Software Full version software with following Modules:	Part of the main System	
a	Basic /Linear dimensions Measurement Module		
b	Complete features Module		

c	Complete GD&T (Geomatrical Dimensioning & Tolerance) Measurement Module	INR	55000
d	Self calibration Module		
e	Administrator & User customisation Module		
f	Light Calibration Module		
g	Life time upgradation of Inspec software from Micro Vu, USA		Free of cost
h	Future ready Module supports with multisenser attachments such as Touch Probe Kit, Rotary Indexer, Laser Kit etc .(Multi Senser attachments need to be ordered separately and NOT applicable with		
	Total Machine (hardware and software price in Indian Rupees without custom duty, without Freight and without taxes under High Sea sales	**INR**	**1655270**
	Total Price CIF (Delhi Airport) without custom duty and taxes under High Sea Sale	INR	**1655270**
	Approximate Additional Expenses:-To be paid directly by Customer		
A	Installation & Training in india by GIC Team (Service Tax applicable) (Installation 1 Day & Training 3 Days)	INR	65000 + IGST @18%
B	Freight and Insurance from USA airport to any Indian Airport	INR	75000
C	Desktop Computer & UPS to be provided by customer as per following configuration:- Computer : Any Brand RAM : 4gb or better HDD : 500gb or better Processer :i3 or better Graphics : 1gb onboard or better(1920x1080 must) Screen : 22inch (1920x1080 must) or better O.S : Win 7professional SP1 or Higher 32/64bit)(Original) UPS : 1kv (dedicated)(don't use central UPS) Cable : One power cable (CPU to UPS type) Power Requirements 100-240VAC, 50/60Hz, 4.0A	INR	To be provided by customer

Terms & conditions:-

1. Order to be placed to:
Geo Informatics Consultants Pvt. Ltd.
A-36 Vikalp Appt. Plot No. 92 I P Ext.
Patparganj, New Delhi, India
Phone- 099584 45016

2.High Sea Sale Agreement:
HSS will be signed and you will be able to file "Bill of Entry" directly for Custom clearence.
All Custom duty benefits/Exemptions/Adjustement with Mod Vat will be applicable.

3.IGST:
Applicable on Installation & Training Charges @ 18% or as applicable.

5. Payment terms:-
50% advance with PO and balance 50% against Performa Invoice.

6. Validity :-
This quotation is valid for 2 months from the date of submission of quotation.

7. Delivery Period:-
This item will be delivered to you within 4 weeks of time upon receipt of your Purchase Order with advance payment.

8. Installation & Training:-
Complete installation & user training will be done by M/s Geo Informatics Consultants Pvt. Ltd. (GICPL), Delhi.

9. Warranty & Support:-
GIC India will provide complete support
12 Months warranty would be provided.
After that AMC can be signed with GIC India.

For, Geo Informatics Consultants Pvt. Ltd.
(Authorized Signatory)
Ridhima Tyagi

ॐ

ABC ENTERPRISES

A Compelete Solution For The Industry

Head Office: 5912, G.F. Opp. Community Center,
Sector 3, Ballabgarh, Faridabad (Haryana)-121004,

Phone: +91-0129-4149856, 9873289752, 9560362991

E–mail: abcenterprises499@gmail.com

Ref. No:-ABC/QS-158/18-19 ***Date: 12.07.2018***

To,

C zone Tester & Engimech Pvt. Ltd.
Plot No- 71/12, Huda Industrial Area,
Dharuhera, Rewari (HR.) 123106,

QUOTATION

S.NO.	ITEMS NAMES:-	QTY.	PRICE
1.	Bruker HHXRF S1 Titan Model 200 alloy Analyzer	1 Nos.	1,150,000
2.	True x Titan Model 800 Alloy Analyzer	1 Nos.	1,250,000

Terms & Conditions:-

1. Price : *FOR REWARI (HR.)*
2. GST : *@ 18%*
3. Delivery : *Within 3- 4 Days after getting confirm order along with advance.*
4. Payment : *100% advance against Performa Invoice.*
5. Freight : *Extra*
6. Packing Charge : *Extra*

Thanking you,

ABC Enterprises
Sandeep Singh / Montu Chauhan
9873289752, 9560362991,
Head Office - 5912, G.F.OPP-Community Center, Sector -3, Ballabgarh
Faridabad, Haryana, Pin code 121004,
GSTIN: 0 6 F S H P S 2012 G 1 Z W

ELECTRONICA HITECH
SRF Electronics Group
FN/MKTG/8.2/F06

Ref. No. 136Q/EDM/ ELTECH D 300 znc
Date: 28th June-2018

TO,
M/S. CZONE TESTERS AND ENGIMECH PVT LTD
PLOT NO 71/12,HUDDA INDUSTRIAL AREA DHARUHERA..

KIND ATTN: Mr. Anand Sharma

Sub. : Your requirement of Electric Discharge Machine

Dear Sir,
We refer to your above mentioned requirement of EDM machine. As you are aware, Electronica for last three decades is in the field of Machine Tool business. Today there are more than 6500 machines working all over the world.

The machine which has been offered to you is designed and developed exclusively for the tool room application.The details of the various features available with our machine are as per our enclosed catalogue. We wish to highlight some of the important aspects of the package from Electronica :

1. Fully calibrated & developed technology.
2. TFT LCD Colour Display
3. Higher Cutting Rates.Finishing we can achieve upto 0.8 Ra.
4. Highest meantime between failures.
5. No rotary switches
6. Best service support available through our 20 Area / Branch offices which are provided with stock of essential spares & consumables.
7. Well established Training and Application Department.
8. LM Guide ways for X,Y & Z axis & Ball Screws for X,Y axis & trapezoidal lead screw for Z Axis.
9. Electrode Lifting upto 100Kg.

With the above important benefits being available to you, we are certain you will definitely consider our offer.

We now look forward to receiving your valued order.

Thanking you,

Yours faithfully,
for ELECTRONICA HITECH MACHINE TOOLS PVT LTD
Authorized Signatory

Q/D300ZNC/June,2017/1

ELECTRONICA HITECH
SFP Electronics Group
FN/MKTG/8.2/F06

QUOTATION

DESCRIPTION	EX-WORKS, PRICE IN RS.
I. ELECTRIC DISCHARGE MACHINE MODEL ELTECH D 300 ZNC WITH 40 A ZNC GENERATOR, PACKAGE CONSISTS OF:	
A) MACHINE TOOL ZNC WITH BUILT IN PUMP FILTER UNIT (DIELECTRIC UNIT) & AC SERVO MOTOR FOR Z AXIS X,Y, Z AXIS TRAVELS 300 X 200 X 250 MM WORK TANK SIZE 800 X 500 X 350 MM SURFACE FINISH 0.8 MICRON Ra MAX.LOAD ON TABLE 300 KG MAX.ELECTRODE WEIGHT 100 KG UNIVERSAL ELECTRODE HOLDER FLUSH AID	**7,90,000/-**
B) PULSE GENERATOR DIGISOFT 40AMPS ZNC GENERATOR. MAX.CURRENT AMPS 40 + 4 MAX MRR (COPPER TO STEEL) 220 MM CU./MIN MIN.ELECTRODE WEAR ≤ 0.2% TFT LCD COLOUR DISPLAY. MICRO CONTROLLER BASED ANTIARC CONTROL.	
C) STANDARD SCOPE OF SUPPLY TO BE SUPPLIED ALONGWITH THE MACHINE, COMPRISING OF	
1) SET OF INSTRUCTION MANUALS	

Q/D300ZNC/June,2017/2

ELECTRONICA HITECH
SFP Electronics Group
FN/MKTG/8.2/F06

2) INSTALLATION KIT

STANDARD ACCESSORIES:

1. Universal Electrode Holder 1Nos
2. Flush Aid 1Nos

OPTIONAL ITEMS:	**Inr PRICES Ex works**
EDM OIL	RS 140 PER LITRE

Terms and condition :-

Packing Charges	Nil
Transportation	By full truck at actuals
Transit Insurance	By EHMTPL (This shall cover from our works to your works up to un-loading of the machine)
Payment Terms	30% advance with the order & balance against Proforma Invoice
Taxes & Duties	Extra. As per GST
Delivery	Within 10- 12 Weeks subject to reconfirmation, on receipt of technically and commercially clear order with 30% of total value as advance.
Order in favor of	**M/s. Electronica Hitech machine Tools Pvt Ltd** **Survey No.194 (old 159), Pune Saswad Road** **Fursungi, Pune - 412308**
Validity	30 days from the date of this offer
Installation and Commissioning	By Electronica and the charges included in the machine price.
Warranty	12 months from date of installation or 15 months from date of dispatched whichever is earlier

For ELECTRONICA HITECH MACHINE TOOLS PVT LTD

Authorized Signatory

Q/D300ZNC/June,2017/3

ELECTRONICA HITECH
SRF Electronics Group
FN/MKTG/8.2/F06

Note :

1) The machine needs a 3 phase 415V, 6 KVA servo stabilizer. This has to be procured separately.
2) The machine needs EDM oil (approx 210 ltrs) to be procure separately. The recommended make is 'ELECTRONICA HITECH' EDM OIL.

Rev-00 1-1-18

Q/D300ZNC/June,2017/4

ELECTRONICA HITECH
SRP Electronica Group
FN/MKTG/8.2/F06

Ref. No. 137Q/WEDM/ JOB MASTER -Dzire
Date : 28-Jun-18

TO,
M/S. CZONE TESTERS AND ENGIMECH PVT LTD
PLOT NO 71/12,HUDDA INDUSTRIAL AREA DHARUHERA..

KIND ATTN: Mr. Anand Sharma

Sub. : Your requirement of Wire EDM Machine

Dear Sir,
We refer to your above mentioned requirement of WEDM machine. As you are aware, Electronica for last three decades is in the field of Machine Tool business. Today there are more than 6500 machines working all over the world.

The machine which has been offered to you is designed and developed exclusively for the tool room application.The details of the various features available with our machine are as per our enclosed catalogue. We wish to highlight some of the important aspects of the package from Electronica :

1. Fully calibrated & developed technology.
2. Highest meantime between failures.
3. Best service support available through our 20 Area / Branch offices which are provided with stock of essential spares & consumables.
4. Well established Training and Application Department.

With the above important benefits being available to you, we are certain you will definitely consider our offer.

We now look forward to receiving your valued order.

Thanking you,

Yours faithfully,

For ELECTRONICA HITECH MACHINE TOOLS PVT.LTD.

Authorized Signatory

ELECTRONICA HITECH
SRP Electronica Group
FN/MKTG/8.2/F06

SALIENT FEATURES

- Embedded Windows 7 Operating System with USB & Lan.
- Cutting Speed - 160 mm³/min. on dia.0.25 mm special brass wire on 50mm thick work Piece.
- Industrial PC
- High Speed, Precision Machine.
- Best Surface Finish -0.6 µ Ra.
- 5 Axis CNC Controlled System.
- AC servo system for all 5 axis with direct coupled Ball Screws for X,Y,U,V axis
- Compact Foot print.
- Compact rigid T base structure.

ELECTRONICA HITECH
SRP Electronica Group
FN/MKTG/8.2/F06

QUOTATION

DESCRIPTION	EX WORKS PRICE IN RS.
WEDM Machine Model : Job Master -Dzire • MAIN TABLE TRAVEL (X,Y) – 400 X 300 mm • TABLE TRAVEL (U x V) – 80 X 80 mm • Z AXIS TRAVEL - 250 MM • MAX.JOB WEIGHT 300 KGS • MAX.TAPER ANGLE ±30°/50 MM • ECOFRIENDLY MINERAL BED FILTRATION SYSTEM • REFRIGERATED RECIRCULATING LIQUID CHILLER • STANDARD SCOPE OF SUPPLY As listed below.	**29,40,000.00**

ELECTRONICA HITECH
SRP Electronica Group
FN/MKTG/8.2/F06

Sr. No.	Description	Quantity
	STANDARD ACCESSORIES	
1	UPPER FLUSHING NOZZLE (H.T.)	1 NO.
2	LOWER FLUSHING NOZZLE (H.T.)	1 NO.
3	VERTICALITY ALINGMENT PIECE	1 NO.
4	WIRE GUIDE REMOVAL GAUGE RING	1 NO.
5	JOB CLAMPING KIT	1 NO.
6	UMBRELLA COMPLETE	1 NO.
7	DIAL STAND	1 NO.
	STANDARD CONSUMABLES	
1	CARBIDE CURRENT PICK-UP *	2 NOS.
2	WORKPIECE FOR TRIAL	1 NO.
3	WIRE GUIDE TYPE 0.255 DIA. (1 SET – 2 NOS) *	1 SET
4	ION EXCHANGE RESIN	5 KGS
5	EDM WIRE (SOFT) 0.25mm Ø Diffused. (3~3.5 KG SPOOL)	1 SPOOL
6	SET OF FUSES	1 SET
7	CONTROLLER KEY	1 SET
8	UPPER FLUSHING NOZZLE *	1 NO
9	LOWER FLUSHING NOZZLE *	1 NO
	***Fitted on machine**	
	SOFTWARE PACKAGE	
	OFFLINE PROGRAMMING SOFTWARE ON USB/CD	1 NO

ELECTRONICA HITECH
SRP Electronica Group
FN/MKTG/8.2/F06

INSTALATION KIT :

1	ALLEN KEY SET 1.5mm TO 10mm	1 NO
2	DOUBLE ENDED OPEN JAW SPANNER	1 SET
3	SCREW DRIVER SET	1 SET

MANUALS :

1	MACHINE TOOL INSTRUCTION MANUAL	1 NO
2	DI-ELECTRIC SYSTEM INSTRUCTION MANUAL	1 NO
3	OPERATING MANUAL	1 NO
4	TECHNOLOGY MANUAL	1 NO

	OPTIONAL ACCESSORIES:		**Rs.**
1	ADJUSTABLE BRIDGE	1 NO	35000.00
2	ROUND JOB HOLDER	1 NO	15000.00

ELECTRONICA HITECH
SRP Electronica Group
FN/MKTG/8.2/F05

TERMS & CONDITIONS

Transportation	By full truck at actuals on to pay basis
Packing Charges	Nil
Transit Insurance	Extra to be arranged & borne by the customer (This shall cover from our works to your works up to un-loading of the machine) It is advised to take insurance covering complete warranty of the Machine by you ,in case of any accidental damage we will not offer any warranty
Payment Terms	30% advance with the order and balance Against Proforma Invoice before dispatch of machine.
Taxes & Duties	Extra. As per GST.
Delivery	2-3 months subject to reconfirmation, from the date of receipt of technically and commercially clear order with 30% of total value as advance.
Validity	30 days from the date of this offer
Order in favor of	ELECTRONICA HITECH MACHINE TOOLS PVT.LTD. S.NO.-194 (OLD 159), FURSUNGI , PUNE –SASWAD ROAD, PUNE -412308.
Installation and Commissioning	By Electronica and the charges included in the machine price.
Warranty	12 months from date of installation or 15 months from date of dispatched whichever is earlier

For ELECTRONICA HITECH MACHINE TOOLS PVT.LTD.

Authorized Signatory

ELECTRONICA HITECH
SRP Electronica Group
FR/MKTG/8.2/F06

Note:

1. **The machine needs a 3 phase 415V, 15 KVA servo stabilizer also the machine need isolation transformer. This has to be procured separately.**
2. **The machine needs D. M. Water (approx. 400 ltrs) to be procured separately.**
3. **If voltage fluctuations are abnormal then additional precaution is to be taken by using either isolation transformer or motor alternator set. This has to be procured separately.**
4. **The machine should be kept in Air Conditioned Room having vibration free industrial floor and temperature has to be maintained at 20°, +/- 1° for achieving job accuracy and has to be placed as per our floor plan otherwise we reserve the right to Cease the warranty**

PART PROGRAMMING SYSTEM SPECS. REQUIRED

System configuration for part programming system software for Job Master -Dzire

The System should be IBM COMPATIBLE with following minimum specifications:

- PENTIUM –IV processor with WINDOWS XP-PROFESSIONAL with 32 bit operating system
- 4 GB RAM
- 200 GB Hard Disk
- 2 Serial Ports
- CD Rom Drive
- standard keyboard
- Three button mouse
- SVGA color monitor
- Minimum 2 USB Port-2.0

Note: Anti-Virus Software should load on PC.

N.B.: 1. additionally a CVT or UPS suitable for above selected configuration PC should be provided.

Rev-00 1-1-18

Macstat International Pvt. Ltd.

Plot no. 259, Sec. - 6 IMT Manesar Gurugram (HR)

Cell : - +919717069696

QUOTATION

M/S- C zone engineering solutions

NH- 8 DHARUHERA REWARI HARYANA

QTN.No. MIPL/2018/0159

Date: 12.07.2018

Enquiry: visit

E-Mail: sharmaindustries@hotmail.co.in

Date: 02 /07/2018

Kind Attn: Ashwani sharma

Subject: Quotation for Horizontal Boring Machine

Dear Sir,

We thank you for the interest shown in our product. In response to your Enquiry regarding Horizontal Boring Machine, We are pleased to submit hereby our lowest quotation for this Machine.

S.NO.	STOCK CODE	MACHINE DESCRIPTION	QTY.	UNIT PRICE (In Rs.)
01		**HORIZONTAL BORING MACHINE** **UNION WMW BF-80 HORIZONTAL BORING**	01	1800000
		GST	18%	324000
		Total		**2124000/-**

Terms and Conditions:

1) Payment	:	100% Payment before Delivery
2) Delivery	:	Immediate after Payment (No Guarantee & Warranty)
3) Taxes & Duties	:	Extra as Actual
4) Insurance, Forwarding	:	By Yourself
5) Freight Charges	:	By your self
6) Test Trial	:	As it is

We are sure you find our offer in line with your requirement and in case you need any further information, please feel free to contact us.

OUR GSTIN DETAILS

GSTIN :- 06AAHCM3585A1ZN

OUR BANK DETAIL

MACSTAT INTERNATIONAL PVT.LTD.

ICICI BANK DLF PHASE-IV WEALTH BRANCH

A/C NO. – 165305500001

IFSC CODE ICIC0001653

Thanking you.

For, Macstat International Pvt Ltd.

Authorized signatory

MD Corporation

M/s.**CZONE TESTERS AND ENGIMECH PVT LTD**
Address : Plot no 71/12, HUDDA INDUSTRIAL AREA, DHARUHERA
Mail: dnesolutions79@gmail.com
Mob:08901197202
Kind Attn : Mr. Anand Sharma

FFG FEELER

MAG India IAS Pvt. Ltd.
#67, 1st Main,
Industrial Suburb
2nd Stage, Yeshwantpur,
Bangalore 560 022
www.mag-ias.com

Qtn No :FFG /MDC/3084

Date : 28.6.2018

QUOTATION

We are pleased to furnish the following quotation for **FEELER VMP 32A series** CNC Vertical Machining Center (Fixed Column Type).

Standard Machine details	Qty	Price in INR
VMP 32A with with Mitsubishi M80 control	1 Set	**31,50,000 .00**

Standard Accessories included in Basic machine price
• Spindle speed **10,000 RPM** with steel bearings (oil cooler not included)
• Travel: 820mm(X), 520mm(Y), 505mm(Z)
• Rapid feedrate - X/Y axis: 40M/min, Z axis: 30m/min (Linear guide on X/Y axis, Z axis Box type with Turcite B guide)
• Pretensioned ballscrew on X/Y/Z axes
• Automatic Tool Changer (Twin Arm Type) : **24 tools**
• Spindle nose taper : 7/24 taper **BT 40**
• AC spindle motor for Main Spindle : **7.5/ 11 kw** - Mitsubishi
• AC servo motor for X/Y/Z axes : Mitsubishi
• 10.4" Touch Screen LCD + 32 Bites CNC control system
• Synchronous tapping cycle (Rigid Tapping)
• Manual Pulse Generator (Mobile)
• RS 232 serial / USB interface
• Auto Power OFF
• Door interlock
• Machine Lamp
• Automatic lubrication system (for slide way & ball screw)
• Spindle air blast
• Coolant tank with chip tray & pumps
• Spindle Coolant Nozzles
• Pneumatic system
• Full enclosed machine guard + top roof with Side flushing facility
• Tool kit
• Instruction manual in English - (2) sets + (1) soft copy (service manual, wiring diagram and parts list)
• Standard color as per our catalogue

Page 1 of 3

MD Corporation

M/s.**CZONE TESTERS AND ENGIMECH PVT LTD**
Address : Plot no 71/12, HUDDA INDUSTRIAL AREA, DHARUHERA
Mail: dnesolutions79@gmail.com
Mob:08901197202
Kind Attn : Mr. Anand Sharma

FFG FEELER

MAG India IAS Pvt. Ltd.
#67, 1st Main,
Industrial Suburb
2nd Stage, Yeshwantpur,
Bangalore 560 022
www.mag-ias.com

Qtn No :FFG /MDC/3084

Date : 28.6.2018

Terms and conditions of Sale:

Validity of quote :
45 Days from the date of quotation

Scope of supply:
As per technical proposal

Terms of price :
Price upto Customers Factory, Unloading of Machine on Customer's account.

Order to be placed on :
MAG India IAS Pvt. Ltd.
67, 1st Main, Industrial Suburb, 2nd Stage,
Yeshwantpur, Bangalore – 560 022

Payment terms :
30% advance along with PO
Balance 70% + 100% applicable taxes against proforma invoice after inspection prior to dispatch

Inspection :
At our works before dispatch of the machine by your Representative

Transportation :
To customer account

Taxes and duties :
GST **@ 18% will be charged extra**

Insurance :
To Customer account. Dispatch details will be informed by FFG MAG India

Delivery time :
16 - 20 weeks from the date of receipt of order along with advance

Warranty :
12 Months from date of installtion or 15 months from the date of dispatch which ever is earlier
24 months for CNC System, motors & drives (from date of dispatch)
Warranty is not applicable for parts which has normal wear & tear also items like Bulbs, Lamps & Seals
The damage to machine due to any accident is not coverd under the warranty

MD Corporation

M/s.**CZONE TESTERS AND ENGIMECH PVT LTD**
Address : Plot no 71/12, HUDDA INDUSTRIAL AREA, DHARUHERA
Mail: dnesolutions79@gmail.com
Mob:08901197202
Kind Attn : Mr. Anand Sharma

FFG FEELER

MAG India IAS Pvt. Ltd.
#67, 1st Main,
Industrial Suburb
2nd Stage, Yeshwantpur,
Bangalore 560 022
www.mag-ias.com

Qtn No :FFG /MDC/3084

Date : 28.6.2018

Legal Jurisdiction :
Bangalore

Commissioning :
Machine will be commissioned by FFG MAG India Engineer.
Machine erection / installation in customer scope
If in case any application support for component trials may be required, FFG MAG India can deoute our engineer on a chargable basis

Training:
Training will be imparted for two persons for use & maintenance of the machine free of cost at our works.
Boarding, Lodging & Travel expenses to be borne by customer

Liability :
Liability of equipment will be transferred to customer immediately upon dispatch from our works

Cancellation :
No order embodying cancellation is acceptable to FFG MAG .
In the event of cancellation of order, FFG MAG reseves the right to forfeit the advance

After Sales Service :
After sales service will be rendered by our Service Engineer upon customer request after the expiry of warranty period on chargeable basis . Kindly contact us for further details

- 0 -

Page 3 of 3

FSCURTIS
AIR COMPRESSORS

Proposal Reference SBA/722
Date 16 july 2018

M/S- CZONE Engineering Solution
Khushkhera

Kind Att : Mr. Devinder Ji (8199988431)

Subject: Offer for 20 HP & 25 HP Screw Air Compressor

Dear Sir,

We take this opportunity to introduce ourselves as **FS Compressors India Pvt. Ltd.**, a group company of Taiwan's top Industrial house, **Fusheng Industrial Co. Ltd.**
The group has 19 manufacturing units across the globe, and, as per an American survey, the **3rd largest manufacturer of air compressors in the world,** in 2014 - 2015.

Our manufacturing unit at Pune is the hub to manufacture **'FSCURTIS'** Piston and Screw Compressors, and **FSELLIOTT** of centrifugal compressors. Our product range comprises of:

1) **3-20 HP in piston compressors (lubricated and oil free type)**
2) **10 – 40 HP booster compressors for high pressure upto 40 bar (g)**
3) **5 - 500 HP in Oil Injected Screw Air Compressors.**
4) **20 – 250 HP Water Injected Oil Free Screw Compressors**
5) **5 – 20 HP oil free scroll compressors**
6) **250 – 4500 HP centrifugal compressors**
7) **Compressed air accessories like dryers, filters, receivers etc**

Fusheng Industrial Corp was incorporated in 1953 as an Air compressor company in Taiwan. Over the years, they have established three main business divisions viz., Machinery, Electronics, & Sporting goods with all the divisions under the directives of the Group Chairman. The machinery division is the largest of the three and represents th true global portfolio of the group. The companies and brands under the Group are

1) FS-Curtis, Curtis Toledo for screw and piston Air compressors based in St. Louis MO USA,
2) FS-Elliot Co., for centrifugal compressors based in Pittsburgh Pa. USA,
3) FS Europe GmbH Germany for R&D and Engineering.
4) FS-Precision Tech Co. LA Cal. USA, for manufacturing high precision casting products for automotive, medical and aerospace industry.
5) ALMiG for air compressors, based in Germany

The group has maintained the spirit of 'Pursuing excellence and enriching lives' and is applied to every corner of the enterprise's activity. The company strives for and continuous improvement.

FS-Compressors India Pvt. Ltd.,
Gat No.357/17/2 & 357/18, Waghjainagar Ambethan Road,
Kharabwadi, Taluka- Khed, Dist- Pune, Maharashtra -410501

S B AIR ENGINEERS
1st Floor J-748,No. 14 C
Phase-II Indl Area, Bhiwadi

FSCURTIS
AIR COMPRESSORS

Proposal Reference SBA/722
Date 16 July 2018

In India, we have regional offices and resident engine trained service personnel across the country to cater to the customer needs and services. We boast of a Clientele that encompasses a wide array of industries, some of which are ONGC, Bharat, Linde, Hindalco, L&T, Praxair, PepsiCo, Coco Cola, Mahindra, Essar Power, GE Energy, Reliance, Indian Oil, Bharat Petroleum, Hero Motocorp, Hindustan Petroleum and Indian Railway

It is our earnest wish to be associated with your organization in our area of interest for a mutually fruitful longstanding business relation. Our team of Engineers will be glad to visit you for providing the best of compressed air systems.
Looking forward to receive details of your compressed air requirements.

Yours sincerely,

Chandar Shekhar
+91 8800900650
chandar@fscurtis.in

FS-Compressors India Pvt. Ltd.,
Gat No.357/17/2 & 357/18, Waghjainagar Ambethan Road,
Kharabwadi, Taluka- Khed, Dist- Pune, Maharashtra -410501

S B AIR ENGINEERS
1st Floor J-748,No. 14 C
Phase-II Indl Area, Bhiwadi

FS CURTIS AIR COMPRESSORS

Proposal Reference SBA/722
Date 16 July 2018

Technical Specifications of the Compressed Air System 15 KW :

	MODEL	SEM20
	Working Pressure- Kg/CM^2	7 Bar
	Capacity at Full load Pressure (CFM)	92
	Sound Level	75 ± 3
	ELECTRICAL DATA	
	Motor- kW (HP)	15 (20)
	Voltage- VAC	415
	Motor Enclosure	TEFC (IP55)
	Rotor Profile	5 : 6
	Dimensions	
	L x W x H – MM	1080 x 880 x 1298
	Weight- Kg	480

Technical Specifications of the Compressed Air System 18 KW

	MODEL	SEM25
	Working Pressure- Kg/CM^2	7 bar
	Capacity at Full load Pressure (CFM)	113 cfm
	Sound Level	75 ± 3
	ELECTRICAL DATA	
	Motor- kW (HP)	18 (25)
	Voltage- VAC	415
	Motor Enclosure	TEFC (IP55)
	Rotor Profile	5 : 6
	Dimensions	
	L x W x H – MM	1080 x 880 x 1298
	Weight- Kg	600

SALIENT FEATURES OF FS-CURTIS COMPRESSORS:

DBA SHIELD NOISE REDUCTION (*Can be installed near the point of use without noise worries.*):

- Generously sized vibration isolation reduces low-frequency noise transmissions.
- High Quality sound attenuation foam

eCOOL TECHNOLOGY (*Exclusive System Protection*):

FS-Compressors India Pvt. Ltd.,
Gat No.357/17/2 & 357/18, Waghjainagar Ambethan Road,
Kharabwadi, Taluka- Khed, Dist- Pune, Maharashtra -410501

S B AIR ENGINEERS
1st Floor J-748,No. 14 C
Phase-II Indl Area, Bhiwadi

FS CURTIS AIR COMPRESSORS

Proposal Reference SBA/722
Date 16 july 2018

- The ultimate in system protection and reliability.
- Protects critical components from compressor generated heat
- Extends compressor life and reduces downtime

QUALITY COMPONENTS (*Built to the highest levels of dependability*):

- Multiple function inlet and discharge valve reduces connections by up to 90 percent.
- Exclusive airend rotor profile results in higher air delivery at lower power consumption.
- All components are generously sized and selected for utmost reliability.
- Can be used in harsh environments

SUPERIOR PACKAGE DESIGN (*Low cost of ownership.*):

- Space saving compact design.
- Exclusive FS-Curtis airends feature the latest rotor profile to maximize efficiency.
- Designed for easy serviceability.
- Simplifies maintenance through easy access to all components.

STANTARD FEATURES

- Powder coated enclosure
- Laminated oil-proof sound insulation
- Four, keyed side panels
- Washable Cabinet pre-filter panels
- AIMS alpha numeric controller
- BSA airend
- 24V DC control voltage transformer
- Spin-On Oil Filter
- High Efficiency air / oil separator
- Inlet valve modulation
- Premium efficiency TEFC (IP55) motor

FS-Compressors India Pvt. Ltd.,
Gat No.357/17/2 & 357/18, Waghjinagar Ambethan Road,
Kharabwadi, Taluka- Khed, Dist- Pune, Maharashtra -410501

S B AIR ENGINEERS
1st Floor J-748,No. 14 C
Phase-II Indl Area, Bhiwadi

FS CURTIS AIR COMPRESSORS

Proposal Reference SBA/722
Date 16 July 2018

- **Wye-Delta motor starter**
- **Closed inlet starting**
- **Multi-Function inlet valve**
- **Multi-Function discharge valve**
- **Vibration Isolators**
- **Factory filled synthetic lubricant**
- **Air Cooled Oil Cooler and After Cooler**

FS-Compressors India Pvt. Ltd.,
Gat No.357/17/2 & 357/18, Waghjainagar Ambethan Road,
Kharabwadi, Taluka- Khed, Dist- Pune, Maharashtra -410501

S B AIR ENGINEERS
1st Floor J-748,No. 14 C
Phase-II Indl Area, Bhiwadi

FS CURTIS
AIR COMPRESSORS

Proposal Reference SBA/722
Date 16 july 2018

Special Price Details

OFFER FOR FS-CURTIS OIL LUBRICATED FIX SPEED SCREW AIR COMPRESSOR

Sr No	Description	Qty	Unit Price	Discount	Discount Price
1	Model : SEM20 (20 HP Screw air Compressor) Capacity- 92 CFM @ 7 Bar Pressure	1	Rs. 4,30,000/-	35%	Rs.2,80,000/-
2	Model : SEM25 (25 HP Screw air Compressor) Capacity- 113 CFM @ 7 Bar Pressure	1	Rs. 4,60,000/-	35%	Rs. 2,99,000/-
3	Model No: : 1 M^3 Air Receiver (1000 Ltr Air Receiver for 30 HP compressor Package)	1	Rs. 51,000/-	15%	Rs.42,000/-

New Technology with FS-CURTIS Screw air Compressor

Large Volume, Low Pressure Drop design to ensure highest air intake efficiency. Air intake is automatically adjusted according to the customer demand to ensure best efficiency and energy saving

Consumables cost 4000 hours FSCurties SEM20 (20 to 30 HP)

S No	Consumables		Life(Hours)	Unit Price	TOTAL QTY	BASIC TOTAL PRICE
1	Air Filter, Hrs	Hrs	2000	1150	2	2300
2	Oil Filter, Hrs	Hrs	2000	1752	2	3504
3	Air Oil Separator	Hrs	4000	8200	1	8200
4	oil Fil	10 Ltr	4000	4600	1	4600
						18604

FS-Compressors India Pvt. Ltd.,
Gat No.357/17/2 & 357/18, Waghjainagar Ambethan Road,
Kharabwadi, Taluka- Khed, Dist- Pune, Maharashtra -410501

S B AIR ENGINEERS
1st Floor J-748,No. 14 C
Phase-II Indl Area, Bhiwadi

FSCURTIS
AIR COMPRESSORS

Proposal Reference SBA/722
Date 16 july 2018

Terms & Conditions

Taxes & Duties : The above prices are Ex Works, PUNE / Ex-warehouse in India
GST shall be extra as applicable at the time of invoicing.

Delivery: Within 2-3 Weeks, Ex Works, from the date of receipt of your technically and commercially clear Purchase Order along with advance. The delivery period stated herein is the standard lead time subject to change time to time. Deliveries for the bulk orders shall be discussed separately.

Packing Forwarding Freight & Transit insurance charges: Packing and forwarding is charged @ 3% of basic order value, Freight & Transit Insurance charges and duties any thereof, shall be directly settled with freight forwarder or vendor..

Supervision of Erection and Commissioning: NO Extra charges in warranty period. Please provide a separate Work Order for the Supervision of Erection and Commissioning work.

Warranty: 12 months from the date of commissioning or 18 months from the date of dispatch or 4000 running hours, whichever is earlier for manufacturing defect or fault workmanship?

Payment terms: 30% non refundable advance along with technically and mmercially clear Purchase Order, balance with 100% applicable taxes & duties against preform invoice, at least "7" days prior to dispatch.

Validity: This offer shall be valid for a period of 30 days; the validity can be extended with our written consent.

In case you need any further clarifications please feel free to contact us.

For **FS Compressors India Pvt. Ltd.**

Chandar Shekhar
+91 8800900650
chandar@fscurtis.in

For S B AIR ENGINEERS [AUTHORISED DEALER)

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+91 9887026766
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S B AIR ENGINEERS
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Kolkata - 700 016
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Fax: + 91 33 2281 7750

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Express Towers
Nariman Point
Mumbai - 400 021
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+ 91 22 6665 5000 (18th floor)
Fax: + 91 22 22876401 (6th floor)
+ 91 22 2282 6000 (18th floor)

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Goregaon (E), Mumbai – 400 063
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Fax: +91 22 6749 8200

15th Floor, The Ruby, 29,
Senapati Bapat Marg, Dadar (W), Mumbai
- 400 028, India
Tel: +91 22 6192 000

NCR
Golf View Corporate Tower – B
Near DLF Golf Course
Sector 42
Gurgaon – 122002
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Fax: + 91 124 464 4050

6th floor, HT House
18-20 Kasturba Gandhi Marg
New Delhi - 110 001
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Ernst & Young LLP

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