Draft Detailed Project Report

Sheet Metal Fabrication Cluster, Sirsa

Submitted to,

Department of Industries and Commerce
Government of Haryana
(for assistance under Mini Cluster Scheme)

Report No. 2018-CHD-XXXX

October 2018

Submitted by,
ELAY Sheet Fabrication Pvt. Ltd.

Prepared by,
Ernst & Young LLP
Under the project: MSME Ecosystem Transformation in Haryana

24th October 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 (CFC) at sheet metal fabrication cluster, Sirsa for your kind perusal. The deliverable has been prepared in accordance with our engagement agreement with Directorate of Industries, Govt. of Haryana dated 03 Jan 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
- MSME-DI, Karnal
- DIC, Sirsa
- Members of the SPV
- Fabrication units located in and around Sirsa
- Industry experts
- Secondary research

Our work has been limited in scope and time and we stress that more procedures that are detailed may reveal other issues not captured here. The procedures summarized in our Draft Detailed Project Report 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. The 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 development of Common Facility Centre (CFC) at fabrication cluster, Sirsa 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').

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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 Mr. 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** for his proactive support and guidance to the team during the entire process.

We would like to convey our sincere thanks to members of Global Agriculture Manufacturing Association Sirsafor their support during the on-site visits and interactions with fabrication units in Sirsa as well as facilitation in conducting stakeholder consultations. Further, we would also like to thank stakeholders of **'Global Agriculture Manufacturing Association' &'ELAY Sheet Fabrication Private Limited'** for providing support and information related to fabrication units in Sirsa.

Also, we must extend our sincere thanks to fabrication 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 of the industry insights would not have been possible.

Abbreviations

AoA	Article of Association
B2B	Business to Business
BDSP	Business Development Service Providers
BEP	Break Even Point
BIS	Bureau of Indian Standard
BoD	Board of Directors
CAGR	Compound Annual Growth Rate
CDCC	Cluster Development Coordination Committee
CEO	Chief Executive Officer
CFC	Common Facility Centre
CNC	Computer Numeric Control
CU	Capacity Utilization
DIC	District Industries Centre
DIPP	Department of Industrial Policy and Promotion
DPR	Detailed Project Report
DSR	Diagnostic Study Report
EM	Entrepreneur Memorandum
EPP	Enterprise Promotion Policy
ERP	Enterprise Resource Planning
FAR	Floor Area Ratio
GAMA	Global Agriculture Manufacturing Association
GDP	Gross Domestic Product
GoH	Government of Haryana
GOI	Government of India
GSDP	Gross State Domestic Product
HFC	Haryana Financial Corporation
HSIIDC	Haryana State Infrastructure & Industrial Corporation
HUDA	Haryana Urban Development Authority
IIDC	Industrial Infrastructure Development Corporation
INR	Indian National Rupees
IRR	Internal rate of return
ISO	International Standardization Organization
IT	Information Technology
ITI	Industrial Training Institute
kW	Kilowatt
MNC	Multi National Company
MoA	Memorandum of Association
MSME	Micro, Small & Medium Enterprises
MSME DI	Micro Small and Medium enterprises Development Institute
NCR	National Capital Region
NH	National Highway
NOC	No Objection Certificate
NSIC	National Small Industries Corporation

PAT	Profit after tax
PMC	Project Management Committee
R&D	Research and Development
ROCE	Return on Capital Employed
SIDBI	Small Industries Bank of India
SLSC	State Level Steering Committee
SME	Small, Medium Enterprise
SPV	Special Purpose Vehicle
SWOT	Strength, Weakness, Opportunity and Threat
UAM	Udhyog Aadhar Memorandum

Table of Contents

List of Figures

List of Tables

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 leveraging funding under the State Mini Cluster Scheme providing grant under its EPP 2015.

In this context, this Detailed Project Report (DPR) has been prepared to seek grant-in-aid assistance under the State Mini Cluster Scheme to set up a state-of-the art Common Facility Centre (CFC) in sheet metal fabrication cluster at Sirsa District, Haryana.

About the Sheet Metal Fabrication Cluster, Sirsa

The fabrication industry is sub sector of engineering sector and its growth is very closely linked with the overall growth of the engineering sector. This sector is expected to grow in future and has a positive outlook owing to infrastructure development, favourable government policies and new investments in power projects, metals, oil & gas, and petrochemicals industries.

The global metal fabrication market was valued at US$16.35 bn in 2015 and is forecast to expand at a CAGR of 3.0% to reach US$21.38 by 2024.Europe was identified as the key metal fabrication market, holding approximately 1/4th of the global market share in 2015. Favorable government regulations have strengthened the European metal fabrication market. Germany held the leading market share in the European region and is expected to witness rapid growth during the forecast period, expanding at a CAGR of 4.3%.

Asia Pacific is one of the key regions holding a comparatively larger share in the global metalfabrication market in 2015 and is expected to dominate the market throughout the forecast period.China held the majority of the market share in Asia Pacific as well as globally and is projected toexpand at a CAGR of 2.4% from 2016 to 2024.Furthermore, the growth of the industrial sector across Asia Pacific haspositively influenced the expansion of the metal fabrication market in the past few years.

In India, the engineering and fabrication industry is the largest out of all the industrial segments,accounting for about 3% of the country's GDP and providing employment to more than 4 millionsemi-skilled and skilled workeINRDepartment of Commerce, Government of India set a $125 billion target for engineering and fabricationexports for the 2013-2014 period. And so far, much has been achieved and many more opportunitiesare showing off in the Indian fabrication sector. The capital goods and turnover in India is expectedto hit US$125.4 billion by the year 2017. The fabrication exports in India for the financial year 2014-2015 registered at US$70.7 billion, which was a 14.6% growth. Most of the exports in India for its fabrication and engineering goods were directed to Europe andUS, which accounts for more than 60% of all the exports. Recently, the exports from India to SouthKorea and Japan are also on the increase, rising to about 60%. In general, the

fabrication industry is a promising market. With the development in the associatedindustries such as infrastructure, the industry is expected to hit over $150 billion by 2017.

There are about 150 micro fabrication units in Sirsa district, Haryana with 12 units registered under UAM (Udoyag Aadhar Memorandum). These units are predominantly located in near Sirsa bus stand and vill. Kagdana and with NH-9 as the nearest major national highway. The annual turnover of the cluster is between INR 4-5 Crore. These units producehousehold fabricated items like Air coolers (including components like grills, tubs, blade, leg sets etc.), junction boxes, steel handle & shutter, MCB and steel almirah, storage containers etc.

Diagnostic Study and Interventions

A diagnostic study was undertaken by the cluster members in August 2018 to map the existing business processes in the cluster, identify the gaps, and understand the requirements of the cluster. The diagnostic study report (DSR) was compiled by the cluster stakeholders in close coordination with the District Industries Centre, Sirsa. The awareness level of the cluster units (on new fabrication technologies, cluster development initiatives, etc.) was found to be low. Additionally, it was observed that most of the cluster units deploy out-dated technologies and are unable to meet the requirements of the market due to lack of availability of modern machines/requipment. The quality of products is ordinary due to dependence on manual techniques and conventional machines. These were the major pain areas that necessitated an urgent intervention. In this context, the units decided to establish a CFC.

The DSR was validated by the Consultant (Clusters), Govt. of Haryana & Deputy Directior DI Sirsa on 29th Auguest 2018and was subsequently approved by the Director Industries & Commerce on 3rd September 2018. The SPV was granted permission to go ahead with preparation of Detailed Project Report (DRP) for the cluster.

Proposed Common Facility Centre

The proposed CFC will facilitate job work facility with modern machinery for various machining activities like Punching, Pressing, Drawing & powder coating etc.

Such a common facility will both supplement and complement the activities of firms in the cluster, and there is no similar facility available in the district for use by cluster micro enterprises. The proposed common facilities will be utilized by the SPV members and will also be available to non-members units within and outside the cluster. The facility will provide a much needed infrastructural push to the cluster units and will enable them to become more competitive.

Special Purpose Vehicle for Project Implementation

After the diagnosis study, the cluster units came together to form a Special Purpose Vehicle (SPV) by the name and style of **'ELAY Sheet Fabrication Private Limited'.** The SPV has been set up as a Private Limited Company under section 7 of theCompanies Act, 2013. DIC, Sirsa has played an important role in SPV formation by cluster stakeholders. The SPV already includes about 12 members 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 **'ELAY Sheet Fabrication Private Limited'** by availing support from Government of Haryana (under EPP 2015).

The SPV members have a track record of cooperative initiatives=Cluster members have been autonomously undertaking several soft interventions to enhance knowledge and exposure of the cluster units on new trends in fabrication industry and enhancing productivity of their units. This includes exposure to cluster development initiatives in other clusters, exposure visits to fairs, registration under UAM, awareness programs on new trends in fabrication, and new technologies. These programs were conducted in collaboration with DIC, State Government and BDS providers.

Project Parameters, Viability and Sustainability

The Sheet Metal Fabrication Cluster, Sirsa with support from State Government (under the Mini Cluster Scheme) is planning to set up a Common Facility Centre having state-of-the-art fabricationfacilities to undertake job work of cluster units with a total project cost of about **INR224.38 lakhs**. However, the maximum eligible project cost as per the scheme guidelines is INR 200 lakhs, with government of Haryana's grant restricted to 90% of max eligible project cost i.e. to INR 180 lakhs. Hence, the SPV members have proposed to contribute entire amount beyond INR 180 lakhs, taking their overall contribution to about **44.38 of the total project cost.** Support from State Government is envisaged for **INR 180.00 Lakhs.**

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

PROJECT COST				
S. No.	**Particulars**	**Total Project Cost**	**Amount as per Guidelines**	**Remarks**
1	**Land & Building**			
	a. Land Value	0.00	0.00	**Eligible (Max 25% of total of L&B, P&M, and Misc. F.A.)**
	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	183.98	200.00	
	b. Imports	0.00		
	c. Secondary Machines	22.82		
	Sub Total (B)	**206.79**	**200.00**	
3	**Miscellaneous fixed assets (C)**	**1.40**	**0.00**	
4	**Preliminary & Preoperative Expenses (D)**	**3.39**	**0.00**	**Not eligible for grant**
5	**Contingency**			
	a. Building @ 2%	0.00	0.00	
	b. Plant & Machinery @ 5%	10.34	0.00	
	Sub Total (E)	**10.34**	**0.00**	

6	**Margin money for working capital**			
	(Working capital required @ 75% C.U.)	2.45	0.00	
	Sub Total (F)	**2.45**	**0.00**	
	Grand Total (A+B+C+D+E+F)	**224.38**	**200.00**	

The actual total project cost is estimated to be INR224.38 lakhs. As indicated above, assistance to the project from the Govt. of Haryana is envisaged to the tune of INR180 lakhs. SPV contribution is to the tune of INR 44.38 lakhs of the total project cost. The means of financing are presented below:

S. No.	Source of finance	Project cost upto INR 200.00 lakhs (max eligible as per scheme)		Project cost over INR 200.00 lakhs		Total Amount (INR in lakhs)
		Percentage Contribution	Amount (INR in lakhs)	Percentage Contribution	Amount (INR in lakhs)	
1	Grant-in-aid under Mini Cluster Scheme (Govt. of Haryana)	90	180.00	0	0	180.00
2	Contribution of SPV	10	20.00	100	24.38	44.38
	Total	**100**	**200**	**100**	**24.38**	**224.38**

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%)	54.70%
2	Av. ROCE (PAT/CE)	32.99%
3	Internal Rate of Return (IRR)	27.78%
4	Net Present Value (at a discount rate of 10 per cent) - incorporating viability gap funding (grant) by GoH	NPV is positive and high (INR lacs) at a conservative project life of 10 years
5	Payback period	years with Grant-in-aid assistance from GOH

6	DSCR	Not Applicable (non-availment of term loan in this project)

As evident from the financials above, with viability gap funding under Mini Cluster Scheme of GoH, the project is highly viable and sustainable. The project is expected to generate surplus from the fourth year of operation. 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 6 months upon receipt of approval of grant-in-aid assistance from the Government of Haryana under State Mini Cluster Scheme. The project will be implemented by the SPV in close association with DIC, Sirsa.

In addition, for implementing this CFC project, a Project Management Committee (PMC) comprising of the Deputy Director, DICSirsa, and representatives of the SPV 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 State Level Steering Committee and DIC, Sirsa.

The potential for the Sheet Metal Fabrication Cluster, Sirsa to grow is enormous, with an increasing demand of fabricated products in the region. Increased GDP leads to higher purchasing power of subjects. In modern culture, when a house is build, there is a trend to use fabricated metallic grills instead of conventional cemented/timber grills, door windows etc to get asthetic appealing looks. The natives prefer better designs from the used one. Sirsa is a developing district and expanding its urbanities. Along with this, fabrication work is also needed. Further, growth in agro sector boosts the requirement of agro implements. This is also favorable condition for fabrication sector. The products fabricated by local fabricators have good repo among local people and they prefer those products to branded ones. This has created large demand of fabricated products. As the result, many of fabrication units come up in the region. However, the cluster units are unable to effectively cater to these market segments due to lack of technological capacities, low production scales and outdated processes.

This cluster has the ability to increase its output and market share by manufacturing high quality 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 fabricated product requirements of the market. The facility will also provide an opportunity to micro units to increase their capacity utilization and profitability. The facility will provide a major infrastructural 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

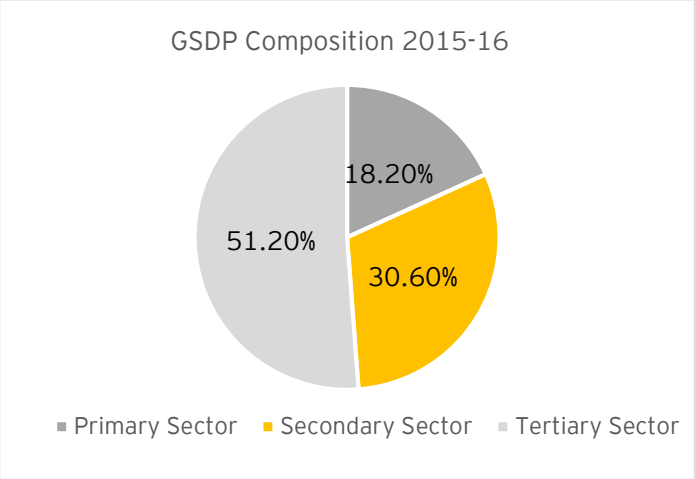
1.1 Overview of the cluster

The fabrication sector forms a sub segment of the engineering industry and is one of the smallest in terms of turnover. This is a highly fragmented and labour intensive sector with medium and small-scale industries heavily dependent on job work. There are about 150 sheet metal fabrication based units in Sirsa district, Haryana, with 12 have been formed a Special Purpose Vehicle (SPV) namely **'ELAY Sheet Fabrication Private Limited'** to set up a Common Facility Centre (CFC) to address common problems of the cluster. The cluster comprises of 150 micro & small sheet metal fabrication units. The cluster units are engaged in production of household fabricated items like Air coolers (including components like grills, tubs, blade, leg sets etc.), junction boxes, steel handle & shutter, MCB and steel almirah, storage containers etc.

The annual turnover of the MSME units in the cluster is about INR 100 crores. The cluster generates employment for approx. 1500 persons.

1.2 About the State & District

Figure 1: GSDP Composition 2015-16



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

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 and large number of skilled, educated and young workforce. Besides, the State has an investor-friendly policy and regulatory environment. It is one of the leading states in terms of industrial production, especially passenger cars, mobile cranes, two-wheelers & tractors. It is the second 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 third largest exporter of software.

1.3 Industrial Scenario of Sirsa District

Over the past few years, Haryana has emerged as one of the three most progressive states of India with an impressive progress in the field of agriculture, business and economy. Although, Sirsa has been named as one of the India's 250 most backward districts. The primary economy of this place depends on agriculture and wide array of MSME industries.

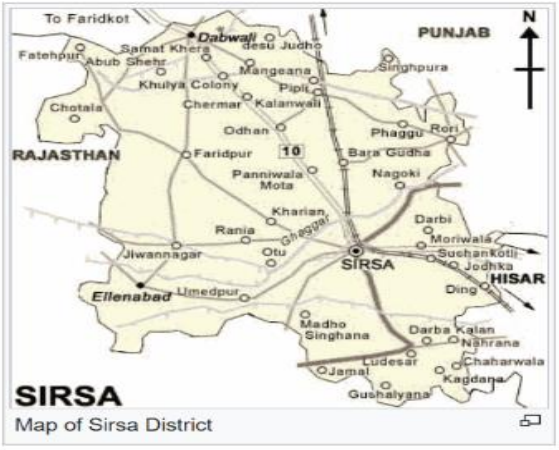
The main resource of economy of the district is agro product and primary occupation of inhabitants of Sirsa is agriculture, owing to which it has gained the popular name "Cotton Belt of Haryana". Following the two crops system, crops like bajra, paddy and cotton are sownin kharif season whereas corps like barley wheat and gram are grown in rabi season.

There are much type of industries in the district, which are engaged in the manufacturing of various items such as seed processing, wrapping papers, milk chilling, rice shelling, chemicals, iron and steel fabrication, agriculture implements, leather goods, hard and straw board etc.Industrial Infrastructure Development Corporation(IIDC) is centrally sponsored scheme for development of micro and small units in most backward area of the country. The HSIIDC has authorised for development of this scheme as project work for setting up of units in this area. All the infrastructure facilities have been developed by the HSIIDC. Udhyog Kunj at Village Bhaudin is situated on the national highway 10 away from the Sirsa city about 15 KM. The above said Udyog Kunj has been developed by the HSIIDC. The land has been offered free of cost by the *gram panchayat*. There are 10 plots of sheds have been constructed and 29 plots 100 & 166 Sq. Yards are open plots. All the residents of Haryana are eligible to participate in the scheme. HSIIDC is the nodal agency to implement this scheme. The State Government has decided to give incentive to the units coming up in the Udyog Kunj as applicable under the rural industrialization programme.

1.4 Geographical Traits of the district

Sirsa is located 29.53 AND 72.02'E occupying the extreme west corner of Haryana. It has an average elevation of 205 Meters or 672 feet. Sirsa is bounded by the districts of Faridkot and Bathinda of Punjab in the north and north east, Sriganga Nagar district of Rajasthan in the west and south and Hisar district in the east. Thus, it touches the interstate boundaries on three sides and is connected with its own state only in the eastern side. The terrain of Sirsa district can be broadly divided into three parts namely Haryana Plain, Alluvial bed of Ghaggahar or Nali and the sand dune track.

1.5 Demographic Trends and Economic Structure



Map of Sirsa District

Sirsa is a city and municipal council in the Sirsa district of the Indian state of Haryana. It is a town in the westernmost region of the state, bordering Punjab and Rajasthan. Its history dates back to the time of the writing of the Mahabharata. Sirsa district is the largest district of Haryana state, after the creation of Charkhi Dakhri out of Bhiwani district. Sirsa is the district headquarters, and is located on National Highway 9 and 250 kilometers (160 mi) from the capital, Delhi. According to the 2011 census, Sirsa district has a population of 1,295,189 roughly. This gives it a ranking of 378th in India (out of total of 640). The district has a population density of 303 inhabitants per square

kilometer (780/sq mi). As of the 2011 census, its population growth rate over the decade 2001-2011 was 15.99%, with a sex ratio of 897 females for every 1000 males and a literacy rate of 68.82%.

According to the 2011 census, Sirsa district has a population of 16, 34,445. This gives it a ranking of 378thin India (out of 640). The district has a population density of 303 inhabitants per square kilometer (780/sq mi). As of the 2011 census, its population growth rate over the decade 2001-2011 was 15.99%, with a sex ratio of 897 females for every 1000 males and a literacy rate of 68.82%.

The percentage of cultivators to total workers in 2011 in the district was about 22% whereas during 2001 it was 272. This implies that people have moved away from farming due to lower profits. However, the district's economy is still predominantly agriculture based, owing to the existence of good irrigation systems across the district. Industrial activities have started increasing in the district due to the pro-business environment in the state. This had led to generation of employment in secondary and tertiary sectors.

The existing area under industrial use is approximately 76 hectare including the major industrial estate of HSIIDC in Sirsa. In view of a strategic location, available infrastructure, topography and drainage, Government of Haryana has allocated an industrial area of 30.35 hectare in Sirsa district.

Sector Overview

2. Sector Overview

2.1 Global Scenario

At the global level, the fabrication sector growth has depended on the industrial and manufacturing growth and with enhanced export opportunities. Emerging trends like outsourcing of engineering services have also provided opportunities for growth with engineering and design services (such as new product designing, product improvement, maintenance, designing manufacturing systems)getting increasingly outsourced to Asian countries like India. The global market for metal fabrication is fuelled by continued investments in electric furnace and metals processing, the growing aluminium consumption, the reshoring of manufacturing practices in the automotive industry, recovery in non-residential investments, and growing aerospace demand.

The global metal fabrication market was valued at US$16.35 billion in 2015 and is forecasted to expand at a CAGR of 3.0% to reach US$21.38 by 2024[1].

Europe was identified as the key metal fabrication market, holding approximately 1/4thof the global market share in 2015. The growing number of metal fabrication units in Europe is mainly attributed to the growing demand for metal fabricated products from the automotive and manufacturing sectors. In Europe, the industrial scenario is mainly adjudged by the overall growth in the manufacturing and automotive industries. Furthermore, favorable government regulations have strengthened the European metal fabrication market. Germany held the leading market share in the European region and is expected to witness rapid growth during the forecast period, expanding at a CAGR of 4.3%.

Asia Pacific has been one of the key regions holding a comparatively larger share in the global metal fabrication market in 2015 and is expected to dominate the market throughout the forecast period. China held the majority of the market share in Asia Pacific as well as globally and is projected to expand at a CAGR of 2.4% from 2016 to 2024. The establishment of new metal fabrication plants in Japan, China, India, Singapore, and South Korea is mainly driven by the rise in construction activities, the growing number of iron and steel manufacturing units, and an overall rise in the number of manufacturing plants. Furthermore, the growth of the industrial sector across Asia Pacific has positively influenced the expansion of the metal fabrication market in the past few years.

2.2 India Scenario

In India, fabrication contributes significantly to the GDP in terms of fabrication intensive industries, auxiliary products, complementary goods, employment, and user industries.

The engineering and fabrication industry is the largest out of all the industrial segments of India, accounting for about 3% of the country's GDP and providing employment to more than 4 million semi-skilled and skilled workers.

Additionally, the Department of Commerce set a $125 billion target for engineering and fabrication exports for the 2013-2014 period. In addition, so far, much has been achieved

[1]www.transparencymarketresearch.com/technology-market/

and many more opportunities are showing off in the Indian fabrication sector. The capital goods and turnover in India is expected to hit US$125.4 billion by the year 2017. The fabrication exports in India for the financial year 2014-2015 registered at US$70.7 billion, which was a 14.6% growth[2]. This was greatly attributed to demand growth in the UAE and US. Apart from these typical markets, markets in central and western European nations such as Poland give a huge promise.

Most of the exports in India for its fabrication and engineering goods were directed to Europe and US, which accounts for more than 60% of all the exports. Recently, the exports from India to South Korea and Japan are also on the increase, rising to about 60%.

With the development in the associated industries such as infrastructure, the industry is expected to hit over US$150 billion by 2017.Further,it is estimated that by the year 2020, India will be a $40 billion market for fabrication and engineering outsourcing services.

Much of the developments experienced in the fabrication industry have been accounted by the government's positive initiative. On its 2014-2015 Union Budget, the government offered an investment allowance at a rate of 15% to manufacturing companies that invest over $4.17 million within a year in machinery and new plants. Several steps have also been put in place to encourage companies to grow and perform even better.

The growth experienced in the fabrication industry has also been attributed to the Indian government. The fabrication industry has a strategic importance to Indian economy owing it to the integration with other industrial segments. With the aim of improving the manufacturing sector, the Indian government has reduced excise duties on capital goods, factory gate tax, vehicles, and consumer durables. The government has also reduced basic custom duties from 10 to 5% on forged steel rings that are used in manufacturing bearings of electricity generators that are wind operated.

2.3 Cluster Scenario

The Fabricated metal product industry in Haryana carries a weight of 24.55 billon in the manufacturing sector. The index of this group increased from 237.8 billion in 2013-14 to 270.5 billion in 2014-15 recorded a growth of 13.8percent. Cylinder has recorded highest growth of 35.4 percent in this group followed by fasteners (excel, zip-fasteners) at 22.1 percent. The index of fabricated products, others has declined by 32.2percent followed by nuts, bolts, screw & washers, iron/steel 8.2 percent respectively.2 The sector has employs around 1,20,000 persons in Haryana[3].

The numbers of industries under this sector stand at more than 1293 units (as in 2014-15). Number of unregistered fabrication units may reach up to 5000 to 15000. Primary needs of setting up a fabrication unit is electricity and electricity distribution is not an issue in Haryana which has provided an impetus to establish fabrication units with small investment, in small place and with low work force requirement (as low as 2-3 persons). This makes discerning the exact number of fabrication unit in Haryana challenging.

[2]Statistical Abstract Haryana (2015-16)
[3] Annual survey of industries

2.4 Cluster Products

A few of the products manufactured by the cluster are presented in figure 2:

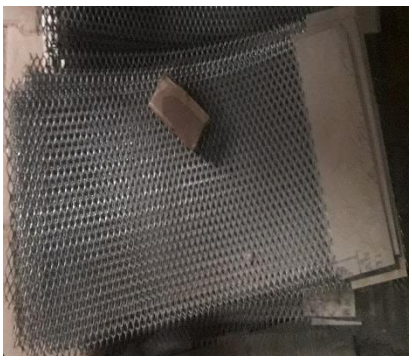
Figure 2: Products Manufactured by the cluster units

Electronics Junction Box

Air Cooler

Almirah

Handles



Channel Gate

Leg Set

Diagnostic Study Findings

3. Diagnostic Study Findings

The diagnostic study has undertaken in the cluster during August 2018 to map the existing business processes in the cluster, identify the gaps, and understand the requirements of the cluster. The diagnostic study report (DSR) was compiled with inputs from cluster SPV in close coordination with the DIC, Sirsa, with inputs from Global Agriculture Manufacturing Society&**'ELAY Sheet Fabrication Private Limited'**. The awareness level of the cluster units (on new fabrication technologies, cluster development initiatives, etc.) was found to be satisfactory. 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 September 2018** and the SPV was granted permission to go ahead with preparation of Detailed Project Report (DPR) for the cluster approval letter for the is provided in ***Annxure-I.*** The major findings of the DSR are presented in the following sections.

3.1 Cluster Actors and their role

Many support institutions and agencies such as industry associations, government agencies, academic/R&D institutes, financial institutions, BDS providers etc. situated within and outside the cluster play a key role in developing the cluster as well in complementing initiatives of the cluster SPV. The key stakeholders of Sheet Metal Fabrication Cluster, Sirsa are:

A. Government Bodies

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

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

- **MSME-Development Institute (MSME-DI), 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 in the state.

- **Haryana State Infrastructure & Industrial Development Corporation (HSIIDC)**
  HSIIDC is an autonomous body set up by the Government of Haryana in 1967, headquartered at Panchkula. HSIIDC has been playing a progressive role in the industrial development of various districts of Haryana. Over the years, it has greatly accelerated the pace of its activities by facilitating land allocation to industries, creating industrial areas and developing required infrastructure. Entrusted fundamentally with the task of establishing industrial areas, HSIIDC has also taken the responsibility of providing continued assistance to the units, which come up in these industrial areas. HSIIDC provides a total package of assistance at a single point to the entrepreneurs and disburses incentives of behalf of State Government. HSIIDC has provided Change of Land Use (CLU) permission from agriculture land to industrial land for acquired land by sheet metal fabrication cluster, Sirsa.

- **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. Sirsa industry is served by the NSIC branch office in Sirsa. It provides diverse services to MSMEs in Sirsa 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

B. Industry Associations

- Global Agriculture Manufacturing Association(GAMA)

  This is newly formed association in Sirsa with the aim of development of micro and small units. Mission of GAMA is to advocate the growth and sustainability of Sirsa metal processing, forming, and fabricating industries. The vision of the association is to create sustainable and holistic development of the cluster by establishing state of the art common infrastructure facilities and increase competitiveness of units by reducing dependencies on external service providers by conducting cluster development initiatives, productivity improvements, networking, marketing, and upgrading skills of employees with support of BDS providers and public-private partnerships to enable them to grow in an increasingly volatile business environment.

- **Industrial Association, HSIIDC, Sirsa**

  The Industrial Association works towards the promotion and development of industrial commerce and trade in Sirsa. The Chamber is well equipped to take up members problems with the concerned authorities. The Industrial Association acts as a common point of contact with the collective strength of its members on issues of local, regional and national importance. It is responsible for organizing, from time to time, meetings with Government officials to voice trade and industry's

problems/suggestions on various issues and also to seek on the spot decision. Some of the cluster firms are members of the association.

- **MSME Chamber of Commerce and Industry Association (MSMECCIA), Sirsa**

MSME Chamber of Commerce and Industry, established in October 2015, is a proactive and dynamic organisation working at the grass-root level with strong National and International linkages. At present 90 industrial units are the members of the association. Chamber acts as a catalyst in the promotion of industry, trade and entrepreneurship. Through its research-based policy and advocacy role, positively influences the economic growth and development of the Nation.

The Chamber located in Sirsa is a story of an institution dedicated to serve the interest of Commerce, Industry and Profession in particular and the economic development of the Country in general. MSME CCI has cultivated a flair for service orientation, which made it a matter of substance for business enterprises to seek membership and the benefit from such services, that they derive. With the in-house expertise, it gives business and legal advice to Indian companies on most aspects of their business. Apart from National and Regional economic and industry related issues, it also includes corporate affairs, taxation, finance and banking, capital markets, infrastructure and energy, labour and industrial relations, human resources and skill development, tourism, agri-business and environment etc.

C. Educational Institutes

- **I.T.I. Sirsa**

I.T.I. Sirsa (Industrial Training Institute) is situated in 13 acre area at a distance of 4.5 km. from Main Bus Stand and 3 km. from Railway Station of the Sirsa city in the vicinity of Industrial Area & F-Block. I.T.I. is itself a benchmark place. This institute started functioning during the session 1963 under Directorate of Industrial Training Deptt. Vocational Education Haryana, Chandigarh.

Directorate General of Employment & Training & run under National Council Vocational Training (NCVT) scheme approves the Courses and some courses are run under State Council Vocational Training (SCVT) Scheme. All admission seekers to NCVT approved various trades (Engineering / Non Engineering) are advised in their own interest that they should confirm and satisfy themselves before seeking admission in any trade that the trade in I.T.I. is affiliated to NCVT.

- **Ch. Devi Lal State Institute of Engineering & Technology, Sirsa**

Ch. Devi Lal State Institute of Engineering & Technology (CLDSIET), Sirsa has dedicated faculty for training the students in job learning opportunities through live projects, research assignments, competitions, management games/ quizzes, industrial training, guest lectures, conferences and seminars.

- **Rajendra Polytechnic, Sirsa**
  Rajendra Polytechnic imparts theoretical and practical training to the 10th, 10+2 (Science), ITI and Vocational standard students as per rules and regulations of Board of Technical Education Haryana Chandigarh. Presently this Polytechnic College is running five branches of diploma in engineering including Electronics &Communication Engineering, Civil Engineering, Mechanical Engineering, Computer Science Engineering and Electrical Engineering.

- **Jan Nayak Ch. Devi Lal Polytechnic, Sirsa**
  Jan Nayak Choudhary Devi Lal Institute is ISO 9001:2008 certified. It was established for providing theoretical and practical training to the students after completion of 10^{th} and 10+2 classes as per rules & regulations of Haryana State Board of Technical Education, Panchkula. Presently Polytechnic is offering courses in diploma in engineering with branches such as Electronics & Communication Engineering, Mechanical Engineering, Computer Science Engineering and Electrical Engineering.

- **Govt. Polytechnic, Sirsa**
  Govt. Polytechnic is situated in the west of the Sirsa City. At present, the institution is offering diploma level courses in Agricultural Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Electronics & Communications, and Mechanical Engineering. In addition to the Regular Diploma courses, scheme of Community Development and a scheme for PCP's (Physically challenged persons) are running in the institute with the Central Govt. aid. In Community Development scheme, non-formal courses are run in the rural areas for their upliftment. At present under this scheme, centres are providing skill development training in welding, Computer Application, Electrical Wiring and Motor Winding, Plumbing, Farm Machinery & Diesel Mechanic, Screen-Printing, Art & Craft, Cutting & Tailoring etc.

D. Banks / FIs

- **Haryana Financial Corporation (HFC)**
  The Government of Haryana and the Industrial Development Bank of India (IDBI) promoted Haryana Financial Corporation, based in Chandigarh, jointly. 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. HFC or Schedule Commercial Bank shall appraise the DPR for the project.

- **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. SIDBI also undertakes numerous programs for development of the MSME sector. It plays a pivotal role in enhancing

awareness of entrepreneurs on various financial aspects. SIDBI is also conducting awareness programs on GST across Haryana.

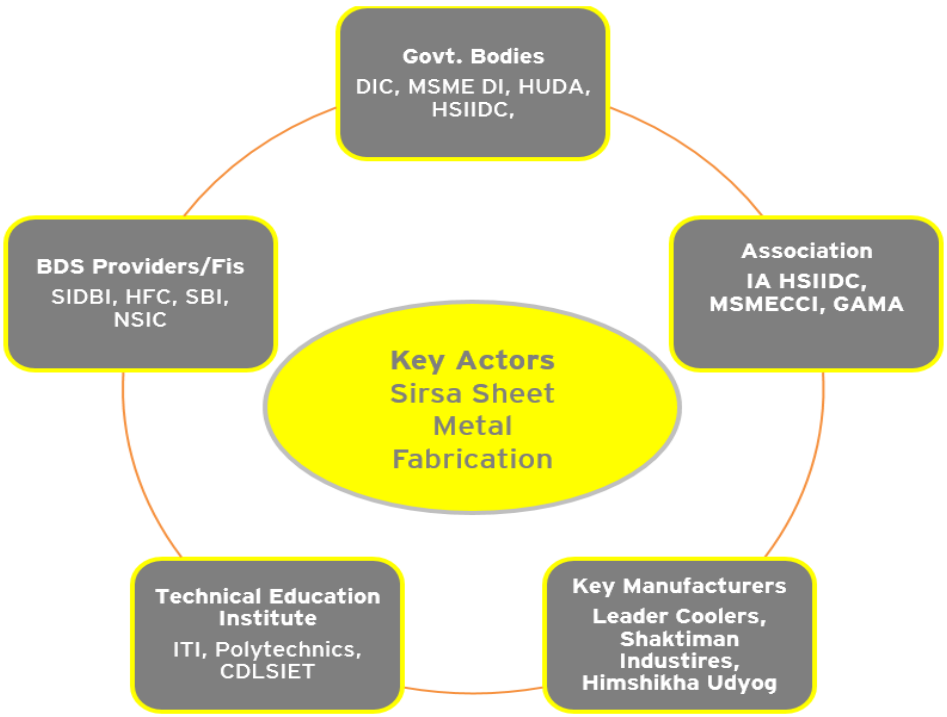
- **Punjab National Bank, Sirsa**
  Punjab National Bank is the lead bank of the Sirsa district and many local light engineering units have a banking relationship with the Bank.

E. Leading Manufacturers

Some of the leading fabrication product manufacturers in Sheet Metal Fabrication cluster include Leader Coolers, Shakitman Industries, Himshikha Udyog etc.

Key stakeholders of Sheet Metal Fabrication cluster are presented in figure 3:

Figure 3: Key Cluster Actors



3.2 Cluster Turnover, Market and Employment

The annual turnover of the MSE units (150) in the cluster is about **INR 100 crores**. However, there is an enormous potential of increasing the production from cluster units by deploying modern CNC Turret Punching Machine, CNC Press Brake & Hydraulic Tank Draw Machine and powder coating facilities. This would also result in enhanced turnover. Currently, units are operating with old, traditional and manual methods, which result in wastage of raw material, poor quality and poor quality finishing of products, which affects their competitiveness as well, enhance their access to OEMs. Recommendations around these have been provided in the DSR.

The cluster units are mainly concentrated in Sirsa town. The fabrication cluster is quite labor intensive. The cluster provides employment to about 1500 persons in which one-third of women workforce involved. Fabrication process includes various activities such as cutting,

bending, welding, notching, broaching etc. On an average, micro and small-scale fabrication units employ approximately 5-10 people.

The average wages of the fabrication industry workforce are of INR 9000 per month for workers operating on8-10 hour shift. The average wages of skilled labor for precision activities such as cutting, welding, etc. is around INR 12,000- 15,000 per month.

Themajor products of the cluster can be divided into two sub categories i.e. Air Coolers and domestic fabricated products. Due to technological backwardness, lack of quality, lower production capacity and poor quality of products, cluster units are unable to obtain and cater to bulk orders from large customers. This cluster has ability to increase its output and market share through manufacturing quality products at competitive prices.

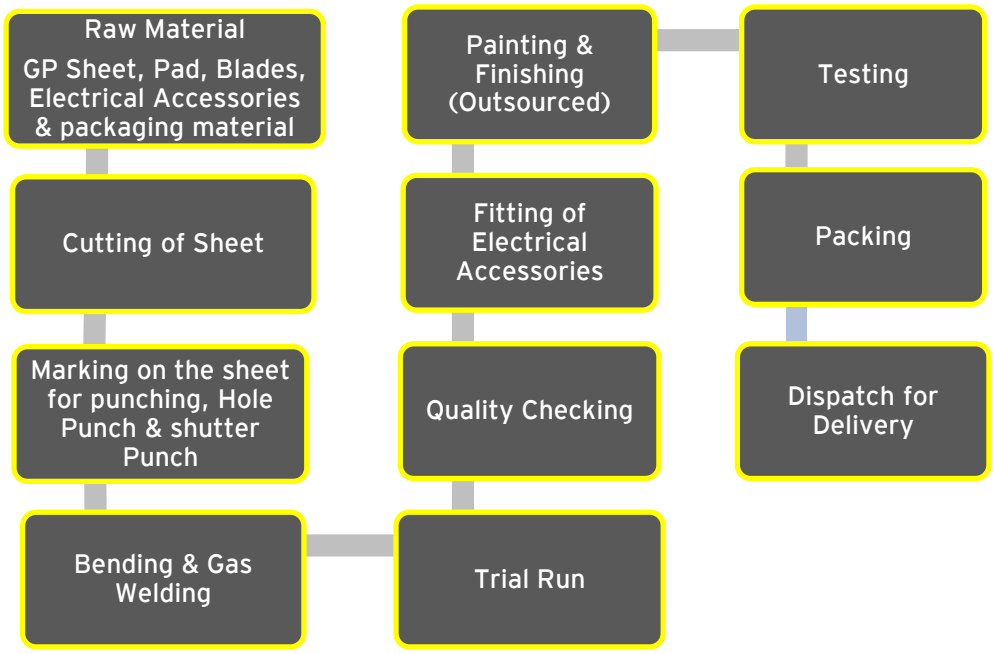
The proposed facility will be open to all cluster firms to enable them to get job work done in order to cater to the fabricated product requirements of the market. The proposed CFC will provide an opportunity to micro units to get job work done on modern machines and manufacture high quality products, thereby increasing their individual capacity utilization and profitability. The facility will provide a major infrastructural push to the units reeling under high competition and will enable the local fabricators to operate in better manner. The CFC will also lead to creation of several jobs for supervisors, machine operators and unskilled workers like helpers both within the CFC and at an individual unit level due to enhanced capacity utilization.

3.3 Production Process

The units in the cluster are engaged in various activities across the value chain of fabrication processes. From selection of raw materials, to the finished products; various engineering activities involved in this process are outlined below.

The flow chart of the production process followed by Fabrication units is shown in figure 4:

Figure 4: Production Process Chart for Air Cooler



1. **Raw Material:** On the very first step, the purchase of raw material, raw material like GP sheet, Electronics accessories & packing material required. The GP sheet purchased from Ludhiana & electrical accessories purchased from Delhi. The manufacturers provide the testing report of sheet.
2. **Cutting of sheet metal:** After the material purchased, the sheet cut according to the required dimension with the help of cutting machine.
3. **Marking on the sheet for punching:** After cutting of sheet according the required dimensions, put the marks on the sheet for punching of holes & shutter punching.
4. **Bending & Gas Welding:** Bend the sheet according to the requirement & join the different parts of the sheet with gas welding.
5. **Paint/Finishing:** Paint & Finishing outsourced from the outside.
6. **Fitting of Electrical accessories:** Electrical fittings like motor, switches, wire & other accessories fitted at their own units.
7. **Quality Checking:** After the finishing & electrical accessories, fitting supervisor checked the product in all respect.
8. **Trial Run:** Trial run executed before delivery to find if there are any defects.
9. **Testing:** Manual testing of item manufactured for defects&, water &airflow test done at their units.
10. **Packing:** If the manufactured item is found in ok condition on trial run, then it is packed accordingly.
11. **Dispatch:** Packed equipment shipped to dealer's premises as per agreement.

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

A SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis of the MSME sheet metal fabrication units in the cluster is 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 provided in table 2:

Table 1: SWOT analysis of the cluster

Area	Current situation		Future	
	Strengths	Weaknesses	Opportunities	Threats
Market	► Steady local demand for cluster products ► Cluster located nearby Sirsa& Dabwali, which is well connected with Punjab & Rajasthan ► Cluster located in the proximity of Delhi which is a major supply hub ► Presence of a large number of buying houses in the region.	► Limited market area ► Lack of exposure ► Units are unable to price their fabrications competitively due to high cost of automatic latest machine.	► Rising income levels and increasing urbanisation are driving growth of the domestic market ► Potential to price products competitively with acquisition of technology.	► Intense competition from other markets.
Technology / Product Quality	► Practical know how and conventional tricks.	► Lack of modern technology ► Lack of awareness ► Using outdated machineries ► Lack of technical know how ► No sophisticated testing facility ► Using of Conventional operational methods.	► Setting up of CFC with modern machinery ► Increased use of turret punching machine to develop designing capabilities ► Exposure to better fabrication cluster like Sirsa Fabrication cluster.	► Increase in cost of production ► Increase in awareness of people on quality certifications shall lead to losing out to business / requirement for more stringent testing procedures

Area	Current situation		Future	
	Strengths	Weaknesses	Opportunities	Threats
				▸ Competition from vendors manufacturing products at lower costs ▸ Faster technology obsolescence.
Skill/Manpower	▸ Skills acquired on-the-job ▸ Presence of technical institutes such as I.T.I. and Polytechnic colleges.	▸ High labour costs ▸ Lack of interaction between MSMEs and technical institutes for providing technical training ▸ No mechanism to mobilize regional youth for training in the sector.	▸ Customized training programs on required skills (operations, soft skills etc.) ▸ Engage technical institutes for skill development programs ▸ Increased cost of labour in China provides opportunity for Indian industry.	▸ Youth interested to work in other lucrative sectors ▸ Working conditions discourage youth to come in this business.
Inputs	▸ Availability of raw materials from local dealers ▸ Buyers sometimes specify dealers from whom they want materials.	▸ No web portal displaying prices and sources of raw materials ▸ Challenge in getting quality in raw material.	▸ Potential to develop a portal displaying information (price, suppliers) of raw materials.	▸ Cost of power is on higher side, which leads to higher cost of production.
Innovation	▸ Ability to Fabricate as per the customers' specifications	▸ Lack of a standardised ERP solution for Fabrication industry ▸ Low investment in development of designs	▸ Development of a standard IT based ERP solution ▸ Structured processes for information sharing	▸ Could lose business to other more price competitive manufacturers from neighbouring states.

Area	Current situation		Future	
	Strengths	Weaknesses	Opportunities	Threats
	► Some units create their own designs and sell these.	► Lack of process automation.	among MSMEs in the cluster.	
Business Environment	► Steady growth in domestic demand ► Cluster well known in local area. ► Eger to be benefitted from Govt. schemes.	► Lack of knowledge of regulatory frameworks and government schemes among micro level Fabrication units ► Limited to local area. ► 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 ► Create better awareness of government schemes and regulations	► Change in policies and regulatory environment ► Increase in rate of raw material.
Energy/Environment	► No such operation, which highly harm the environment except welding.	► 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 ► Change in govt policies.

3.5 Major Issues / Problem Areas of the Cluster

As can be deciphered from the analysis in the preceding sections, cost competitiveness of MSME units engaged in light engineering process in the cluster, is affected by absence of in-house modern CNC Turret Punching Machine, CNC Press Brake & Hydraulic Deep Press Machine and powder coating facilities. Most of the MSMEs are unable to individually afford those 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 powder coating & and designing, who too do not have appropriate modern technologies to perform these operations. Those private players charge exorbitant price for their services. Apart from that, there is a need of CNC Turret Punching machine, which can be used to make different types of Design & model of proposed machine (as per need of client) in a quick succession. This facility would enable them to save their raw material (which costs more than 50% of product cost.) 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 Modern Machinery for Machining:** The major problem of the cluster is lack of modern machinery. The units are using conventional machines and methods for processes, which are too old, and needs to be upgraded, particularly for sheet fabrication. These machineries are out-dated and cannot match the quality and standard of modern age. The machines are slow and consume time and energy.

- **Lack of product design & development facilities:** Due to absence of CNC Turret Punching Machinery, the cluster units are unable to design & develop the different types of products. In addition, they are not able diversify their products and are unable to innovate. At present, they are making only standard design of the products.

- **Lack of Space:** Units are very small. They cannot stock bulk quantity of raw material in their place. Therefore, they cannot purchase raw material in bulk to save money.

- **Marketing:** 100 %market for the cluster is within Delhi, Haryana, Punjab& Rajasthan. Therefore, there is scope for expansion of the market. They have to increase their capacity and capability in terms of technology, buying power, manufacturing etc. to meet the customer's expectations.

- **Technology:** Fabrication 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 work force:** Lack of skilled work force is responsible for wastage of raw material, higher production time, low accuracy and low productivity results.

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.

3.6 Key technologies missing

The technological gaps on various fronts that the CFC proposes to target, along with scope and illustration of major facilities is provided in table 3.

Table 2: Rationale for 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	
Currently the fabrication units proceed with manual machining methods or using outdated lathe/milling machines. This put extra burden on fabricators as those machines are slow and it is very difficult to get precision work out from them. Further, maintenance of those old machines is also time and money consuming. Likewise, modern machines, those machines cannot handle multiple operations at a time, which leads to slower process, and higher production time. This is the pain area of the cluster.	Installation of modern machine provides better usage of raw material, shorter production time and multiple operations at a time. Those machines require low maintenance and offers lower production time. Fully automated high quality, high precision pressing & draw machines are required for achieving accuracy, quality and consistency along with productivity, which increase quality of the product and decrease raw material wastage.
The units are using conventional machines and methods for processes, which are too old, and needs to be upgraded, particularly for sheet and metal based fabrication. These machineries are out-dated and cannot match the quality and standard of modern age. The machines are slow and consume time and energy. Fabricators are using conventional manual methods for bending & pressing operation. It is very difficult to achieve accuracy by those manual techniques. Those methods are highly time consuming & laborious too which put negative effect on operations and product. Some time they have to outsource	By establishing of CNC Press Brake & Deep Draw Press machines, with higher accuracy &less operational time are required to increase the productivity. The products, which they specially fabricated in cluster, are generally full of designs and several times, they need to press & deep draw job as per drawing/design. So, this facility is much needed in the cluster.

this service in case of complex design or bigger workpiece.	
Product Design & Development Facility	
At present, the cluster units are using the conventional methods for punching & designing. Cluster units are only dependent on standard designs for their products. Due to these conventional methods for design & development, which is resulting in improper designing, time delays and higher, costing. Some of the firms are also losing market due to poor designing of the products. In addition, they are not able diversify their products and are unable to innovate, Thus; there is a need to establish a design &development centre.	By establishing the CNC Turret Punching Machine under the banner of CFC, cluster units are able to do the mass production & reduce the wastages of material & material handling time. This machine is used for making different designs on work-piece to make it more attractive. This facility is also helpful for cluster units for developing new design. In addition, the cluster units are able to develop the new designs for their products.
Powder Coating Facility	
Fabricators are using conventional manual methods for bending & pressing operation. It is very difficult to achieve accuracy by those manual techniques. Those methods are highly time consuming & laborious too which put negative effect on operations and product. Some time they have to outsource this service in case of complex design or bigger workpiece.	Installation of CNC Bending machines, with higher accuracy &less operational time are required to increase the productivity. The products, which they specially fabricated in cluster, are generally full of designs and several times, they need to bend the job as per drawing/design. So this facility is much needed in the cluster.

3.7 Cluster growth potential

The potential for the fabrication cluster, Sirsa to grow is steady. Domestic need for furniture is increasing with the rising purchasing power and the aspiration of rural population to match lifestyle of urbanities. The penetration of social media, demand for better infrastructure at educational institutes, hospitals or offices, and introduction of mall culture is making people aware the lifestyle trends as well as paving way for revolutionary changes in mindset for budgetary provisions by customers to buy the same. This is fueling the growth in fabrication sector therefore the widening gap between rising demand and constant/limited supply is being met by cheap imports as well as opening of factory outlets in India by MNCs. With the domestic manufacturing sector growing steadily, the market for the fabricated metal products industry is set to increase because the user industries are growing steadily.

A large number of micro manufacturing units with a low level of research &development (R&D) characterize the fabricated metal products industry. This is because the MSMEs in

the industry have poor technological base in many cases and do not have the scale of production to be able to increase spend on R&D. From the perspective of the micro units, spending on R&D is risky because of the fast changing and dynamic technological environment, and they find it difficult to continue spending on R&D to cope up with world standards.

Various fabrication clusters may start reverse engineering, adaptation and improvement of borrowed or imported technology for products used in locality. After achieving a certain level of technological development, more resources can be allocated to develop technologically advanced products, and thus close the gap with the large overseas companies having huge R&D funds.

To create successful products and services, manufacturers need to innovate with their customers, working to understand their full value chain and using that insight to create solutions that leverage their full enterprise capabilities to create real value for their customers.

Diagnostic Study Recommendations

4. Diagnostic Study Recommendations

Based upon the diagnostic study report and subsequent discussions with various cluster stakeholders and members of Sirsa sheet metal fabrication cluster during formulation of this Detailed Project Report (DPR), a mix of hard and soft interventions are being proposed to enhance the competitiveness of the cluster units. These have to be undertaken with government support to ensure the survival and growth of the fabrication units in Sirsa. The recommendations for both soft and hard interventions have been elaborated in subsequent sections.

Cluster enterprises have also been undertaking several soft interventions (before, during and after the DSR) on their own and have been active in enhancing their awareness and exposure. The units have conducted several awareness programs and trainings in collaboration with DIC, Sirsa and BDS providers. They have also conducted exposure visits to other developed clusters, participated in national and international exhibitions and facilitated UAM registrations.

4.1 Soft Interventions Recommended and Action Taken

1. **Capacity Building and Awareness Generation:** One of the primary recommendations for soft interventions was to build the capacities of cluster units and generate awareness among stakeholders regarding cluster development (collective approach to address their issues) and benefits available to them in the form of cluster. In this regard, the cluster units had organized a series of workshops, the details of which are provided below:

   - **Member Meetings:** Cooperation and trust building among members is foremost condition for smooth functioning of the cluster and SPV. A meeting was organized by cluster members during the month of August 2018 in Sirsa to enhance cooperation among member units and to obtain inputs for the DSR. Members of the cluster were informed about the registration of company for the cluster and identification of land for the CFC. Members of the cluster raised their concerns during the meeting that were resolved by other members of the cluster.

   - **Awareness Programme on Mini Cluster Scheme:** A programme for awareness of SPV members of fabrication cluster Sirsa on mini cluster scheme was conducted on August 2018. EY team members highlighted the main points of the scheme, informed the cluster member about what benefits they can avail from the scheme, and explained their role in case if they apply for scheme.

   - **UAM registration campaign**: Many of the cluster members, who did not have UAM (Udhyog Aadhar Memorandum), got their unit registered under UAM. That task was done voluntary by Infomind technical and educational society, Sirsa. They not only support cluster members in online filling of UAM but also informed them about benefits of UAM.

2. **Exposure Visits and Participation in Trade Fairs:** In order to enhance the exposure of cluster units on new and emerging technologies in the fabrication cluster, a few of exposure visits were conducted by the SPV. The aim was to gather technical knowledge and expertise required for developing the cluster. Additionally, recommendations for participation in trade fairs and exhibitions were made to provide a platform to cluster units to promote their products as well as witness innovative products being brought out in the market. The following actions were taken in this regard:

- **Exposure Visit to Ludhiana& Batala:** SPV members visited Ludhiana to identify essential machineries for CFC. Ludhiana is the hub of almost all kind of machineries in north India. Being the hub, in present era of competition, Ludhiana produce machines with very competitive prices. While Ludhiana visit, beside the prices, SPV members gained knowledge of latest machineries and technologies, which would be beneficial of proposed CFC.

SPV members had visited NCR region in September 2018 to get sensitize on new trends and technological up-gradation for fabrication operations and they will try to tap new marketing possibilities to expand their market.

4.2 Hard Interventions (Machines / Technology in the proposed CFC)

The fabrication units in the Sirsa need technological support to enhance their competitiveness and ensure their survival. Those units are reeling under bitter competition and low margins. They require modern high capacity automatic machines and other related equipment to get their job work done and reduce their production costs.

The following common infrastructural facilities are being proposed for the CFC, with support from the state industry department.

- **Turret Punching Machine:** used for metal forming by punching. This machine is suited to mass production & can achieve 600 strokes per minute. At present, the cluster units are using the conventional methods for punching & designing. Due to these conventional methods, accuracy & finishing are the main pain areas & led to material wastages. By establishing this facility under the banner of CFC, units are able to do the mass production & reduce the wastages of material & material handling time. This facility is also helpful for cluster units for developing new design.

- **CNC Press Brake:** is used bending sheet and plate material, most commonly sheet metal. It forms predetermined bends by clamping the workpiece between a matching punch and die. At present, the cluster units are using the conventional press brake machine. Due to the absence of this machine units able to bend the sheet & plate according the proper size & shale. This machine can be used at CFC for sheet bending & plate bending.

- **Hydraulic Deep Draw Press:** This machine can be used for clipping bending and moulding coil or steel metal by pressing and stamping the material into the required forms. At present, the cluster units do have Hydraulic deep draw press. This machine will help the units to make complete tank without any joints & increased the life of the tank. Presently units are making the tanks with conventional methods. The reason for this is the favourable force, which is produced by hydraulic presses. It can also be used to fabricate parts and products that are deeper than metal stamping can accommodate.

- **Conveyor Powder Coating Facility:** The cluster units do not have the powder coating facility in house. Units are dependent of private for painting of their products and some of units paint their products by manual process. In addition, the private players charge high prices for painting. By the establishing this facility under the banner of CFC units are able to do the in-house painting & improved the finishing of the products.

4.3 Expected Outcome after Intervention

The project will be beneficial for fabrication units in the cluster as a whole. The setting up of the CFC is expected to generate the following benefits for the cluster units:

- Enhanced value addition for cluster products
- Significant reduction in cost of production and higher capacity utilization by each unit
- Higher degree of competitiveness of cluster enterprises
- Scope for the cluster to target new market segments by developing new and improved products

- The requirements of SPV members are adequate to utilize the capacity of the CFC. Nevertheless all cluster firms shall be encouraged to use the facility. Many micro unit entrepreneurs who could not afford to significantly contribute by way of necessary investment to the equity base of the project have also been accommodated even with low equity contribution.
- The CFC will generate more job opportunities at both the cluster and individual unit level due to enhanced capacity utilization.
- The CFC is also expected to enhance the levels of cooperation and joint-action amongst cluster stakeholders and SPV members to cooperate in other areas such as joint marketing initiatives, common raw material procurement and so on.
- It will also complement the efforts of state government in promoting clusters in the state and serve as a model for upgrading micro enterprise clusters.

Special Purpose Vehicle (SPV) for Project Implementation

5. SPV for Project Implementation

The micro units at Sheet Metal Fabrication 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 18 of the Companies (Incorporation) Rules, 2014. The SPV is named as **'ELAY Sheet Fabrication Private Limited'** with CIN U74999HR2018PTC076511. The SPV was registered on 18th October 2018. The certificate of registration along with Memorandum of Association (MoA) and Articles of Association (AoA) and PAN Card of the SPV are provided in ***Annexure – 2***. The company has an authorized paid up capital of INR 20.00 Lakh which shall be enhanced in the near future. The members are micro-sized firms (registered units) involved in fabrication related activities, predominately based in Sirsa & Dabwali area of district Sirsa.

DIC, Sirsa and state government both played an important role in SPV formation by cluster stakeholders. The SPV includes about 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 SPV **'ELAY Sheet Fabrication Private Limited'** by availing support from Government of Haryana (under EPP 2015) state mini cluster scheme.

The SPV members have a strong record of accomplishment 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 fabrication industry and enhancing productivity of their units as mentioned in the previous sections. These include exposure to cluster development initiatives in other clusters, exposure visits to fairs, registration under UAM and awareness programs on new trends in fabrication industry, design interventions and new technologies. The cluster units conducted these programs only.

The SPV has conducted a series of stakeholder consultations (with various members, DIC, Sirsa 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 scheme in Sirsa and has helped in validation of findings and recommendations. It has kept the state government and the DIC Sirsa engaged during the entire period of development of DSR and DPR.

5.1 Shareholder profile and Shareholding mix

List of Directors: The SPV has three directors. The details of the directors are furnished in the table 3. Other than these directors, the SPV will have provision of having one director each from the state government. The SPV comprises members from micro fabrication manufacturing units. It is homogeneous in nature due to similar products and activities performed by the cluster units:

Table 3: List of Directors

S. No.	Office bearer Name	Name of the unit	Unit address
1	Lalit Bansal	Leader Cooler Industries	Opp. N.S.M. Park, G.T. Road Dabwali
2	Arun Kumar	Shaktimaan Industries	74, Ward No. 14 Mandi Dabwali

The lead promoters/ shareholders have several years of successful experience in production of fabrication products are well versed with the benefits of cluster development initiatives. These units are financially viable in nature.

Members of the SPV have been engaged in production of sheet metal fabrication products in Karnal for several years. SPV directors/ members of the SPV also have considerable experience in marketing and manufacturing of sheet metal fabrication products. Directors/members have been in close interactions with technical experts, government institutions and machinery suppliers.Post the DSR validation, the DIC Karnal also acknowledged the genuineness and enthusiasm of the SPV members to undertake project initiatives under state mini cluster scheme as well as verified the existence of the SPV members. The verified list is provided in **Annexure 3**.

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 table 4.

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Table 4: Details of SPV Members of Sheet MetalFabrication Cluster, Sirsa

List of SPV Members for Sheet Metal Fabrication Cluster, Sirsa						
S.No.	**Contact Person**	**Company Name**	**Contact Number**	**Address of unit**	**UAM Number**	**Products of the cluster**
1	Arun Kumar	Shaktimaan Industries	9416395924	74, Ward No. 14 Mandi Dabwali	HR 17A0002363	Junction Boxes, MCB, Almirah
2	Lalit Bansal	Leader cooler Industries	9466127684	Opp. N.S.M. Park, G.T. Road Dabwali	HR17A0002362	Sheet Shutters, Steel Handles, Coolers, Almirah
3	Gurmeet Singh	Gurmeet Engg. Works	9996831378	Opp. Khalsa School, G.T. Road, Mandi Dabwali	HR17B0002288	Cooler Grill, Leg set & Channel & Almirah
4	Rajiv Kumar	Himshikha Udyog	9466473437	Ward No. 6, Kalanwali	HR17A0000335	Cooler Handle MCB, Steel Almirah
5	Davinder Jain	Vardhman Industries	9316209091	Ward No.1, Mandi Dabwali	HR17A0002354	Sheet Shutters, Steel Handles, Steel Almirah
6	Kunj Bihari	Diksha Industries	9416278260	Ward No. 3, Mandi Dabwali	HR17A0002355	Steel Almirah, Bed, Grill, Shutter, Channel
7	Bhupinder Kumar	Aarav Industries	9023811002	Ward No. 2, G.T.Road, Mandi Dabwali	HR17A0002360	Grill, Leg set, Junction Boxes, MCB, Almirah
8	Abhishek Sharma	Abhi Enterprises	787643638	Meena Bazar Road, Mandi Dabwali	HR17A0002356	Cooler Handle MCB, Steel Almirah
9	Niranjan Dass Garg	Garg Industries	9354464100	Ward No. 8, Mandi Dabwali	HR17A0002365	Sheet Shutters, Steel Handles, Coolers, Almirah
10	Vikas Sharma	Vikas udyog	9354020035	Valmiki Chowk, Dabwali	HR17A0002359	Sheet Shutters, Steel Handles, Steel Almirah

11	Ashwani Kumar	Radhe Radhe Steel Industries	9466748706	Gali No. 5 Ward No. 3 Mandi Dabwali	HR17A0002362	Steel Almirah & other sheet articles
12	Chanaky Sharam	Madhave Enterprises	9017137001	Ward No. 8 Jai Bharat Gali, Mandi Dabwali	HR17A0002386	Cooler Handle MCB, Steel Almirah

5.2 Initiatives undertaken by the SPV

As mentioned in detail in section 4.1 (Soft interventions recommended and action taken), the SPV members have proactively undertaken many capacity building initiatives to promote the cooperation among cluster units and enhance knowledge and exposure of the units. These initiatives have been undertaken in collaboration with DIC, EY, Global Agriculture Manufacturing Association and educational society etc. The major initiatives are:

- Pursuing initiatives in close coordination with DIC, Sirsa to facilitate understanding of cluster development, common procurement, marketing, available government support, latest technology for common facility etc.
- Exposure visit to Punjab/NCR to understand the latest available technology and machinery related to fabrication. This would help them to adopt latest methods and machinery for fabrication and made them more competitive in market.
- Conducting various programs for capacity building, awareness generation and technological advancement in the cluster as well as participation in similar programs organized by stakeholders.
- Identification of land for construction of CFC and collective acquisition of land in the name of SPV.

5.3 SPV Roles and Responsibilities

The SPV will play an important 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
- Execution of lease deed registration of building in SPV name
- Garnering the SPV project 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 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 based on decision by members of SPV.
- Preparation and submission of progress reports to state industry department

The Memorandum and Articles of Associations of the Cluster SPV indicates the democratic process in terms of decision-making based on votes. All members of SPV will meet once

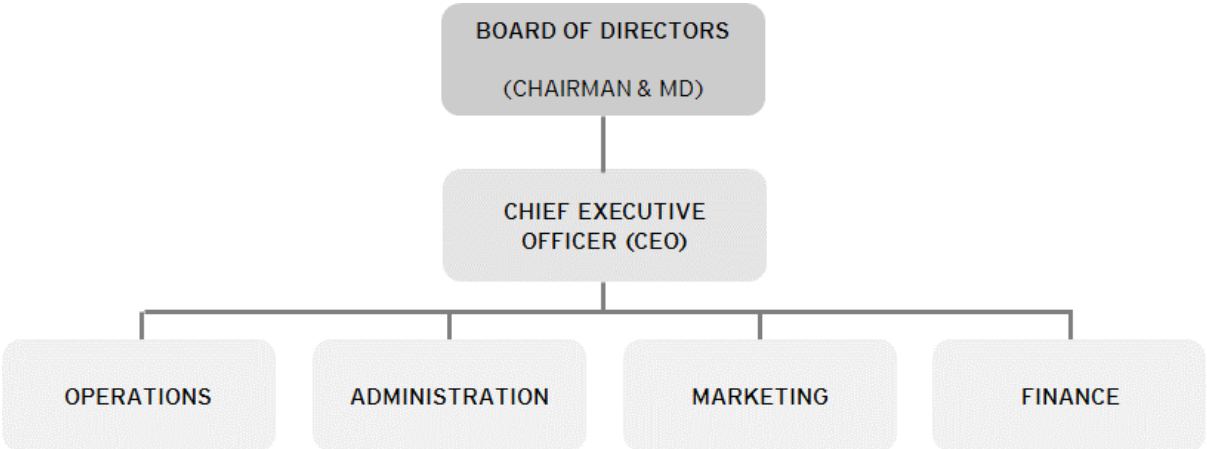
every fortnight/month to discuss/resolve operational issues. The management of the CFC will be a two-tier structure for smooth and uninterrupted functioning. The executive body i.e. Board of Directors (BoD) will include office bearers elected/nominated from time to time, including one nominee of State Government (DIC). They will also remain present during meetings.

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 SPV BoD, and the day-to-day administration will be taken care of by the management that shall be appointed by the SPV BoD. 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 qualified professional with a background in the fabrication industry will be appointed as the Cluster Development Executive (CDE), who will look after day-to-day operations of the CFC and shall be directly reporting to the Board of Directors. Each facility (punching, bending, deep drawing & powder coating etc.) will have its own expert staff (supervisors, operations and helpers) as per the requirement. The details of work force 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, etc. to ensure effective functioning of the CFC. The proposed organizational structure of the CFC is given in figure5:

Figure 5: Organisational Structure of Proposed CFC



Project Economics

6. Project Economics

6.1 Project Cost

The actual total cost of setting up a CFC Sheet Metal Fabrication Cluster, Sirsa is estimated **at INR224.83Lakhs.**

The total cost estimation includes the following project components:

The total cost estimation includes the following project components:

1. Building and civil works
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 Land and Building

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 Chautala Road, Near Jain Mandir Mandi (Dabwali), Distt. Sirsa Haryana**. The available area is 10000 square feet and the monthly rent for the first year would be INR 30,000with an annual increase at the market rate (estimated at 10%).

Table 5: Requirement in terms of land and building

BUILDING - LEASE BASIS		
S. No.	Particulars	Actual Cost
1	Building Area (sq. ft.)	10000
2	Monthly Rent (INR lakh)	0.20
3	Rent for first year (INR lakh)	2.40
4	Year on year increase in rent @	10.00%

6.1.2 Plant and Machinery

As detailed in section 4.2 (Hard interventions) a number of modern automatic and high capacity machines for cutting, welding, machining, grinding etc. 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 Punching, Pressing,

Deep Draw and Powder Coating. The total cost of plant and machinery including secondary machine has been estimated at **INR206.79 lakhs** and contingency works out to **INR 10.34 Lakhs.**

The details of the proposed machinery items are presented in the table 6. The detailed specifications and quotations of the machines are provided in ***Annexure 5.*** 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 6: List of Proposed Plant & Machinery

S.No.	Machine Name	Quantity	Basic Price	Total Basic Price	GST	Total Price	Other Charges	Grand Total
A	**Primary Machinery**							
1	CNC Turret Punch Machine	1	81.50	81.50	14.67	96.17		96.17
2	CNC Hydraulic Press Brake	1	12.50	12.50	2.25	14.75		14.75
3	CNC Hydraulic Deep Draw Press	1	28.00	28.00	5.04	33.04	2.38	35.42
4	Conveyor Powder Coating	1	25.80	25.80	4.64	30.44	2.06	32.50
5	Wagner Paint Gun	3	1.45	4.35	0.78	5.13		5.13
	Sub Total (A)	**7.00**	**149.25**	**152.15**	**27.39**	**179.54**	**4.44**	**183.98**
B	**Secondary Machinery**							
6	DG Set (62.5 KVA)	1	6.10	6.10	1.10	7.20		7.20
7	Screw Air Compressor	1	7.58	7.58	1.36	8.94	0.29	9.23
8	Tooling Set for Turret Punch	7	0.77	5.41	0.97	6.38		6.38
	Sub Total (B)	**9.00**	**14.45**	**19.09**	**3.44**	**22.53**	**0.29**	**22.82**
	Grand Total	**16.00**	**163.70**	**171.24**	**30.82**	**202.06**	**4.73**	**206.79**

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 1.40 Lakhs.**Details are provided in the table 7.

Table 7: Miscellaneous Fixed Assets

MISCELLANEOUS FIXED ASSETS		
S. No.	Particulars	Amount
1	Office Furniture	0.65
2	Office items and allied items	0.25
3	Fire Fighting	0.50
	Total	**1.40**

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, detailed civil engineering drawings with estimates, tendering forms, and tendering cost etc.

Pre-operative expenses include expenses for electricity connection charges, administrative establishment, travelling, bank charges, stationery, telephone, overhead expenses during construction and machinery testing period; such as salaries, machine testing cost, bank charges, travelling etc. It also includes professional project management charges such as consultancy fees will be paid by government of Haryana. The total expenditure for preliminary and pre-operative expenses is estimated at INR3.49 Lakhs(details provided in the table 8).

Table 8: Preliminary and Pre-Operative Expenses

PRELIMINARY & PRE OPERATIVE EXPENSES		
S. No.	Particulars	Amount
1	Company/Society/LLP/Partnership Registration Charges	0.10
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
8	One time electricity connection charges	0.00
9	Lease deed registration charges	1.15
10	Security Deposit (Rent)	0.30
11	Bank Appraisal Charges	0.59
	Total	**3.49**

6.1.5 Provision for Contingencies

Provision for contingencies has to be made on plant/machinery and buildings. Contingencies on plant and machinery have been estimated at 5% that amounts to INR 10.34 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 INR 10.81 lakhs with margin money requirement of INR 2.81 lakhs (25% of working capital requirement as margin). The working capital requirement has been calculated based on requirement of one month of operational expenses and the calculation has been provided in the subsequent section.

6.1.7 Summary Project Cost

A summary of total estimated project cost as per actual and as per mini cluster scheme is presented in the table 9.

Table 9: Total Project Cost

PROJECT COST				
S. No.	**Particulars**	**Total Project Cost**	**Amount as per Guidelines**	**Remarks**
1	**Land & Building**			
	a. Land Value	0.00	0.00	**Eligible (Max 25% of total of L&B, P&M, and Misc. F.A.)**
	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	183.98	200.00	
	b. Imports	0.00		
	c. Secondary Machines	22.82		
	Sub Total (B)	**206.79**	**200.00**	
3	**Miscellaneous fixed assets (C)**	**1.40**	**0.00**	
4	**Preliminary & Preoperative Expenses (D)**	**3.49**	**0.00**	
5	**Contingency**			**Not eligible for grant**
	a. Building @ 2%	0.00	0.00	
	b. Plant & Machinery @ 5%	10.34	0.00	
	Sub Total (E)	**10.34**	**0.00**	
6	**Margin money for working capital**			
	(Working capital required @ 75% C.U.)	2.81	0.00	
	Sub Total (F)	**2.81**	**0.00**	
	Grand Total (A+B+C+D+E+F)	**224.83**	**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 scheme, EPP2015).Working capital loan will be secured from State Bank of India. The assistance to the project from Govt. of Haryana under state mini cluster scheme is envisaged to the tune of 90% of max project cost of 200 lakhs. The SPV will be required to contribute 10% of project cost for project cost up to INR 200 lakh and any amount in excess of 200 lakh. Hence, the SPV members have proposed to contribute INR 44.83 lakhs and GoH aid will be INR 180.00 lakh.

Table 10: Means of Finance

S. No.	Source of finance	Project cost upto INR 200.00 lakhs (max eligible as per scheme)		Project cost over INR 200.00 lakhs		Total Amount (INR in lakhs)
		Percentage Contribution	Amount (INR in lakhs)	% Contribution	Amount (INR in lakhs)	
1	Grant-in-aid under Mini Cluster Scheme (Govt. of Haryana)	90	180.00	0	0	180.00
2	Contribution of SPV	10	20.00	100	24.83	44.83
	Total	**100**	**200.00**	**100**	**21.09**	**224.83**

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/equity contribution would be INR44.83 lakhs contributed by the cluster SPV.

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

6.2.2 Grant-in-Aid

Grant-in-aid of INR 180.00 lakhs is expected from the Government of Haryana. The amount received by the way of grant under state mini cluster scheme will be utilized towards construction of building and 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 given on eight-hour single shift 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 in 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 diesel, hydraulic oil, grease, nozzles and servicing etc.

Table 11: Consumables

CONSUMABLES REQUIRED FOR MACHINES													
S. No.	Machine Name	No. Of Machines	Particulars	No. Of working hours per day	No. Of working days per month	Total monthly Amt (INR)	Consumables required annually (INR In Lakh)	Amount (in INR Lakh)	Amount (in INR Lakh)	Amount (in INR Lakh)	Amount (in INR Lakh)	Amount (in INR Lakh)	Amount (in INR Lakh)
								Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
								75%	80%	85%	90%	95%	100%
A.	**Primary Machines**												
1	CNC Turret Punch Machine	1	Diesel, Lubricants	8	25	4000.00	0.48	0.36	0.38	0.41	0.43	0.46	0.48
2	CNC Hydraulic Press Brake	1	Oil & Servicing	8	25	3000.00	0.36	0.27	0.29	0.31	0.32	0.34	0.36
1	CNC Hydraulic Deep Draw Press	1	Diesel, Lubricants	8	25	3000.00	0.36	0.27	0.29	0.31	0.32	0.34	0.36
2	Conveyor Powder Coating	1	Oil & Servicing	8	25	10000.00	1.20	0.90	0.96	1.02	1.08	1.14	1.20
B.	**Secondary Machines**												
1	DG Set	1	Diesel, Lubricants	8	25	6000.00	0.72	0.54	0.58	0.61	0.65	0.68	0.72

2	Air Compressor	1	Oil & Servicing	8	25	4000.00	0.48	0.36	0.38	0.41	0.43	0.46	0.48
	Total						**3.60**	**2.70**	**2.88**	**3.06**	**3.24**	**3.42**	**3.60**
	Consumables per month						**0.30**	**0.23**	**0.24**	**0.26**	**0.27**	**0.29**	**0.30**

6.3.2 Manpower Requirement

Another major expenditure head is the work force. Therefore, the facilities installed in the CFC will require work force to function effectively as mentioned in section 5.3 of the report. The total work force requirement for the project would be about 13 persons. The work force required under project has been divided under two categories: Direct & Indirect. Direct work force is required for operation of machines while indirect work force is required for administrative purposes. The annual expenditure on salary component for direct labor is estimated at INR **12.80 lakhs** and for indirect at **INR 6.93 lakhs**. The total expense on work force is projected at **INR 1.64 lakh** per month or **INR 19.73 lakhs** per annum. The details of monthly and yearly expenses for work force required for running the project is provided in table 12 & table 13:

Table 12: 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				
CNC Turret Punch Machine (Operator)	1	25,000.00	25,000.00	3.00
CNC Hydraulic Press Brake (Operator)	1	12,000.00	12,000.00	1.44
CNC Hydraulic Deep Draw Press (Operator)	1	10,000.00	10,000.00	1.20
Conveyor Powder Coating (Operator)	1	10,000.00	10,000.00	1.20
Helper	5	8,000.00	40,000.00	4.80
	9	**65000**	**97000**	**11.64**
Add: Perquisites/Fringe Benefits @ 10%				**1.16**
Sub Total (A)				**12.80**

Table 13: Expenditure Related to Salary (indirect labor – 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	25,000.00	25,000.00	3.00
Accountant	1	10,000.00	10,000.00	1.20
Office Assistant/Office Boy	1	8,500.00	8,500.00	1.02
Security Guard	1	9,000.00	9,000.00	1.08

	4	52,500.00	52,500.00	6.30
Add: Perquisites/Fringe Benefits @ 10%				0.63
Sub-Total (B)				6.93
Total (A) + (B)	13			19.73

6.3.3 Utilities

The most important utilities required in the project are 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 58.25 kW. The table below depicts the machine and equipment wise power requirement in the CFC. The drawn power is conservatively assumed 31.77 kW at 60% of the connected load in the case of operating facilities and shop floor.

Table 14: 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	CNC Turret Punch Machine	20	12.00
2	CNC Hydraulic Press Brake	3.7	2.22
3	CNC Hydraulic Deep Draw Press	11.50	6.90
4	Conveyor Powder Coating	3.70	2.22
5	Wagner Paint Gun	1.60	0.96
6	Screw Compressor	7.45	4.47
7	Administrative Facilities	5.00	3.00
	Total Connected load for CFC	**52.95**	**31.77**
	Buffer Connected Load (10% of Total Connected Load)	**5.30**	
	Total	**58.25**	

The power requirement for operation of core machinery and equipment and administrative facilities is 58.25 kWh. Electricity required for shop floor activities in terms of operation of core machinery and equipment is 6354 units per month. The facility is heavily based on electricity for operations and will require additional 10% connected load as a buffer to get the electricity connection. The total connected load for the CFC is estimated to be 58.25 kW.

Fixed charges for connection of 58.25 kW @ INR 173 per kW = INR 57,731 and monthly units consumption is 6354& monthly energy charges @ INR 7.5per unit= INR 47,665. This has been calculated based on the prevalent rates of the power provider. Table 15 presents the estimated annual expenditure in terms of power related charges.

Table 15: 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	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
Variable	4.29	4.57	4.86	5.15	5.43	5.72	5.72	5.72	5.72	5.72
Total	5.50	5.78	6.07	6.36	6.64	6.93	6.93	6.93	6.93	6.93
Per month	0.46	0.48	0.51	0.53	0.55	0.58	0.58	0.58	0.58	0.58

6.3.4 Annual Repairs and Maintenance Expenses

The annual repair and maintenance expenses have been estimated to be INR 6.20 lakh. The details are presented in the table 16below:

Table 16: Annual Repairs and Maintenance Expenditure

ANNUAL REPAIR AND MAINTENANCE EXPENSES	
Repair & Maintenance of Building @ 2%	0.00
Repair & Maintenance of Plant and Machineries @ 3%	6.20
Sub Total A	6.20

6.3.5 Insurance and miscellaneous Administrative Expenses

Insurance is a critical component of asset protection at the CFC. Insurance is computed based on 0.5 % on the fixed assets. Cost of insurance shall remain as a fixed cost. Miscellaneous administrative expenses are estimated at a lump sum of INR1.69lakh per year. The cost of miscellaneous expenses is also considered to be fixed irrespective of scale of operation. The details are presented in the table 17below:

Table 17: Insurance and Miscellaneous Administrative Expenses

No.	Expenditure component	Particulars	Amount per annum (@ 100% C.U. in INR Lakh)
1	Insurance	Estimate @ 0.5% on fixed assets (such as buildings, civil works, and Plant & machinery, including related contingency expenses	1.09
2	Miscellaneous administrative expenditure	Stationery, communication, travelling, and other misc. overheads	0.60
Total			1.69

6.4 Working Capital Requirements

Working capital has been calculated in terms of one month's operating expenses required for the CFC. The operating expenses include consumables, salaries, utilities, repair & maintenance, insurance and miscellaneous administrative expenses. The details are presented in the table below.

Table 18: Calculation of Working capital requirement

WORKING CAPITAL								
S. No.	Particulars	Period	As per Capacity Utilisation					
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			75%	80%	85%	90%	95%	100%
1	Consumables	1 month	0.23	0.24	0.26	0.27	0.29	0.30
2	Utilities (Power)	1 month	0.46	0.48	0.51	0.53	0.55	0.58
3	Working Expenses (Manpower)	1 month	1.38	1.43	1.48	1.54	1.59	1.64
4	Rent	1 month	0.20	0.22	0.24	0.27	0.29	0.32
5	Sundry Debtors (Sales Value)	1 month	8.55	9.12	9.69	10.26	10.83	11.40
6	Working capital (Total expenses)		10.81	11.49	12.18	12.86	13.55	14.24
7	Working Capital Margin		2.81	2.49	3.18	2.86	3.55	3.24
8	Working Capital Loan		8.00	9.00	9.00	10.00	10.00	11.00
9	Interest on Working capital loan @11% p.a.		0.88	0.99	0.99	1.10	1.10	1.21
10	Working Cap Margin %age		25%	25%	25%	25%	25%	25%

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 25% of working capital is shown as margin for working capital and the remaining will be borne by SPV as borrowings. The margin money required for working capital is estimated to INR 10.81 lakh during the first year of operation (75% C.U.). Further, total working capital required at an operating capacity of 80% comes out to INR 11.49 lakh. The corresponding margin money for working capital requirement at 80% & 85%

capacity utilisation amounts to INR 2.49 lakh and INR 3.18 lakh respectively, and the corresponding loan amounts at INR 8.00 lakh and INR 9.00 lakh respectively..

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 year INR Depreciation of building is considered at the rate of 10% per year, depreciation of plant and machinery at 15% a year (envisaged project life of 10 years prior to replacement of assets), furniture 10%, computer 60% and depreciation of other miscellaneous fixed assets at the rate of 15% a year as per the SL method. The computation as per WDV method is provided in the tables below.

Table 19: Calculation of Depreciation Estimate (WDV) Method

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	217.13	184.56	156.88	133.35	113.34	96.34	81.89	69.61	59.17	50.29
Less: Depreciation @ 15%	32.57	27.68	23.53	20.00	17.00	14.45	12.28	10.44	8.87	7.54
Closing Balance	184.56	156.88	133.35	113.34	96.34	81.89	69.61	59.17	50.29	42.75
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	0.65	0.59	0.53	0.47	0.43	0.38	0.35	0.31	0.28	0.25
Less: Depreciation @ 10%	0.07	0.06	0.05	0.05	0.04	0.04	0.03	0.03	0.03	0.03
Closing Balance	0.59	0.53	0.47	0.43	0.38	0.35	0.31	0.28	0.25	0.23
Other Misc. Fixed Assets										
Opening Balance	0.75	0.64	0.57	0.52	0.46	0.42	0.38	0.34	0.30	0.27
Less: Depreciation @ 15%	0.11	0.06	0.06	0.05	0.05	0.04	0.04	0.03	0.03	0.03
Closing Balance	0.64	0.57	0.52	0.46	0.42	0.38	0.34	0.30	0.27	0.25
Total Depreciation	**32.75**	**27.81**	**23.64**	**20.10**	**17.09**	**14.53**	**12.36**	**10.51**	**8.93**	**7.60**
Depreciated value	**185.79**	**157.98**	**134.34**	**114.24**	**97.15**	**82.61**	**70.26**	**59.75**	**50.82**	**43.22**

Under the WDV method, depreciation is considered at the rate of 10% per year on building, 15% on plant, 10% on furniture, computers 60% and 10% on other miscellaneous fixed assets

6.6 Income/Revenue estimates

The CFC is expected to generate revenue by way of user charges that shall be levied based upon the hours a machine is operated for a particular job. 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 Sirsa shall be charged a premium for availing the CFC services. The major income sources for the CFC are envisaged by the way of providing cutting facilities, frozen welding facility, machining facilities etc.

The user charges have been estimated based upon the operational expenses of the CFC and the prevalent market rates in Sirsa. User charges for service machineries 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.

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 for various machineries are presented in table below:

Table 20: Calculation of Income/Revenue

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	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	CNC Turret Punch Machine	1	2000	8	25	48.00	36.00	38.40	40.80	43.20	45.60	48.00
2	CNC Hydraulic Press Brake	1	1500	8	25	36.00	27.00	28.80	30.60	32.40	34.20	36.00
3	CNC Hydraulic Deep Draw Press	1	1000	8	25	24.00	18.00	19.20	20.40	21.60	22.80	24.00

4	Conveyor Powder Coating	1	1200	8	25	28.80	21.60	23.04	24.48	25.92	27.36	28.80
	Total					**136.80**	**102.60**	**109.44**	**116.28**	**123.12**	**129.96**	**136.80**

Total gross revenue in-flow is estimated to INR 102.60 lakhs per annum on an operating capacity of 75%. For projection purposes, operating capacity of 80% is considered during first year, 85% during next third years and 100% capacity from 6th year onwards

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 25.84 lakhs** per annum at an operating capacity of 75%. For projection purposes, operating capacity of 75% is considered during first year, 80% during next year and 95% capacity from 5th year onwards.

The income tax rates have been considered as per rates applicable to a company according to the Income Tax Act, 1961. 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 8.96lakhs** in the first year to **INR 21.89 lakhs** in Year 10.

Table 21: 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)	**102.60**	**109.44**	**116.28**	**123.12**	**129.96**	**136.80**	**136.80**	**136.80**	**136.80**	**136.80**
B. Cost of Production :										
1. Utilities Power (Fixed + Variable)	5.50	5.78	6.07	6.36	6.64	6.93	6.93	6.93	6.93	6.93
2. Direct labour and wages	9.60	10.24	10.88	11.52	12.16	12.80	12.80	12.80	12.80	12.80
3. Consumable	2.70	2.88	3.06	3.24	3.42	3.60	3.60	3.60	3.60	3.60
4. Repair and Maintenance	4.65	4.96	5.27	5.58	5.89	6.20	6.20	6.20	6.20	6.20
5. Depreciation	32.75	27.81	23.64	20.10	17.09	14.53	12.36	10.51	8.93	7.60
Total Cost of production	**55.20**	**51.68**	**48.93**	**46.80**	**45.21**	**44.07**	**41.89**	**40.04**	**38.47**	**37.13**
C. Administrative expenses :										
6. Manpower (Indirect)	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
7. Rent	2.40	2.64	2.90	3.19	3.51	3.87	4.25	4.68	5.14	5.66
8. Insurance	1.09	0.93	0.79	0.67	0.57	0.49	0.41	0.35	0.30	0.25
9. Misc. Expense	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Total Administrative Expenses	**11.02**	**11.10**	**11.22**	**11.40**	**11.62**	**11.88**	**12.19**	**12.56**	**12.97**	**13.44**
D. Financial expenses :										
10. Interest on Working capital loan @ 11% per annum	0.88	0.99	0.99	1.10	1.10	1.21	1.21	1.21	1.21	1.21
Total Financial Expenses	**0.88**	**0.99**	**0.99**	**1.10**	**1.10**	**1.21**	**1.21**	**1.21**	**1.21**	**1.21**
E. Total Expenses B+C+D	**67.10**	**63.77**	**61.14**	**59.30**	**57.93**	**57.16**	**55.30**	**53.81**	**52.65**	**51.79**
F. Profit A - E	**35.50**	**45.67**	**55.14**	**63.82**	**72.03**	**79.64**	**81.50**	**82.99**	**84.15**	**85.01**

G. P&P Expenses written off	0.70	0.70	0.70	0.70	0.70	0.00	0.00	0.00	0.00	0.00
H. Income before Tax (F-G)	34.80	44.98	54.44	63.12	71.34	79.64	81.50	82.99	84.15	85.01
I. Adjustment of Loss	-	-	-	-	-	-	-	-	-	-
J. Income Tax (@25.75% for company)	8.96	11.58	14.02	16.25	18.37	20.51	20.99	21.37	21.67	21.89
K. Net Profit /Loss for the year	25.84	33.39	40.42	46.87	52.97	59.13	60.52	61.62	62.48	63.12
L. Cumulative Surplus	25.84	59.24	99.66	146.53	199.49	258.63	319.15	380.77	443.24	506.37

As evident from the table below, the project is financially viable. A cumulative surplus of about **INR 506.37 lakhs** 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 22: Income and Expenditure 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)		36.38	46.66	56.13	64.92	73.13	80.85	82.71	84.20	85.36	86.22
2. Increase in capital	44.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3. Depreciation		32.75	27.81	23.64	20.10	17.09	14.53	12.36	10.51	8.93	7.60
4. Increase in WC Loan		8.00	1.00	0.00	1.00	0.00	1.00	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	224.83	77.13	75.47	79.77	86.02	90.23	96.38	95.07	94.71	94.29	93.82

B. Use of Funds :											
1. P&P Expenses	3.49	-	-	-	-	-	-	-	-	-	-
2. Increase in fixed assets	218.53	-	-	-	-	-	-	-	-	-	-
3. Increase in other Assets	2.81	0.30	-0.29	0.72	-0.28	0.73	-0.26	0.08	0.09	0.10	0.11
4. Increase in Sundry Debtors		8.55	0.57	0.57	0.57	0.57	0.57	0.00	0.00	0.00	0.00
5. Interest		0.88	0.99	0.99	1.10	1.10	1.21	1.21	1.21	1.21	1.21
6. Taxation		8.96	11.58	14.02	16.25	18.37	20.51	20.99	21.37	21.67	21.89
Total Use of Funds	**224.83**	**18.69**	**12.85**	**16.30**	**17.65**	**20.77**	**22.02**	**22.28**	**22.67**	**22.98**	**23.21**
C. Net Surplus (A -B)		**58.44**	**62.62**	**63.47**	**68.37**	**69.46**	**74.36**	**72.79**	**72.04**	**71.32**	**70.61**
D. Cumulative Surplus		**58.44**	**121.06**	**184.53**	**252.90**	**322.36**	**396.72**	**469.51**	**541.55**	**612.87**	**683.48**

As evident from the table above, the project is financially viable. A cumulative surplus of about INR 683.48 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 many other development activities in the cluster that shall be funded through the surplus earned at the CFC

6.9 Computation of Income tax

As per table no 25, the income tax implication is computed at the rate of 25.75 per cent that is, 25 per cent plus education cess @ 3 per cent. The incidence of tax ranges from INR 8.97 Lakh per annum for year 1 to INR 21.89 lakh per annum in year 10.

6.10 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 23: Income and Expenditure 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)		36.38	46.66	56.13	64.92	73.13	80.85	82.71	84.20	85.36	86.22
2. Increase in capital	44.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3. Depreciation		32.75	27.81	23.64	20.10	17.09	14.53	12.36	10.51	8.93	7.60
4. Increase in WC Loan		8.00	1.00	0.00	1.00	0.00	1.00	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	**224.83**	**77.13**	**75.47**	**79.77**	**86.02**	**90.23**	**96.38**	**95.07**	**94.71**	**94.29**	**93.82**
B. Use of Funds :											
1. P&P Expenses	3.49	-	-	-	-	-	-	-	-	-	-
2. Increase in fixed assets	218.53	-	-	-	-	-	-	-	-	-	-
3. Increase in other Assets	2.81	0.30	-0.29	0.72	-0.28	0.73	-0.26	0.08	0.09	0.10	0.11
4. Increase in Sundry Debtors		8.55	0.57	0.57	0.57	0.57	0.57	0.00	0.00	0.00	0.00
5. Interest		0.88	0.99	0.99	1.10	1.10	1.21	1.21	1.21	1.21	1.21
6. Taxation		8.96	11.58	14.02	16.25	18.37	20.51	20.99	21.37	21.67	21.89

Total Use of Funds	224.83	18.69	12.85	16.30	17.65	20.77	22.02	22.28	22.67	22.98	23.21
C. Net Surplus (A -B)		58.44	62.62	63.47	68.37	69.46	74.36	72.79	72.04	71.32	70.61
D. Cumulative Surplus		58.44	121.06	184.53	252.90	322.36	396.72	469.51	541.55	612.87	683.48

The cash flow statement highlights the available net surplus for 10 years of the CFC operations. Depreciation is also considered on a higher side on the straight-line method for cash flow calculations along with adjusted preliminary expenses. As most of the capital expenditure is being supported as grant under the Mini Cluster scheme, EPP 2015, therefore it does not have any negative effect on the Cash flow, in terms of interest, etc.

6.11 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 24: Projected 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	218.53	218.53	185.79	157.98	134.34	114.24	97.15	82.61	70.26	59.75	50.82
Less : Depreciation (WDV)		32.75	27.81	23.64	20.10	17.09	14.53	12.36	10.51	8.93	7.60
Net Block	218.53	185.79	157.98	134.34	114.24	97.15	82.61	70.26	59.75	50.82	43.22
Total Fixed Assets (A)	**218.53**	**185.79**	**157.98**	**134.34**	**114.24**	**97.15**	**82.61**	**70.26**	**59.75**	**50.82**	**43.22**
2. Current Assets :											
Cash & bank Surplus (B.F)		58.44	121.06	184.53	252.90	322.36	396.72	469.51	541.55	612.87	683.48

Sundry Debtors		8.55	9.12	9.69	10.26	10.83	11.40	11.40	11.40	11.40	11.40
Margin Money for WC Loan	2.81	2.81	2.49	3.18	2.86	3.55	3.24	3.28	3.31	3.35	3.39
Other Current Assets		0.30	0.33	0.36	0.40	0.44	0.48	0.53	0.58	0.64	0.71
P&P Exp	3.49	2.79	2.09	1.40	0.70	0.00	0.00	0.00	0.00	0.00	0.00
Total current Assets (B)		**72.89**	**135.09**	**199.16**	**267.12**	**337.18**	**411.85**	**484.72**	**556.85**	**628.26**	**698.98**
Total Assets (A+B)	**224.83**	**258.68**	**293.07**	**333.49**	**381.36**	**434.33**	**494.46**	**554.98**	**616.60**	**679.08**	**742.20**
3. Current Liabilities :											
Working Capital Loan		8.00	9.00	9.00	10.00	10.00	11.00	11.00	11.00	11.00	11.00
Total Current Liabilities (C)		**8.00**	**9.00**	**9.00**	**10.00**	**10.00**	**11.00**	**11.00**	**11.00**	**11.00**	**11.00**
4. Fixed Liabilities											
Shareholders' Contribution	44.83	44.83	44.83	44.83	44.83	44.83	44.83	44.83	44.83	44.83	44.83
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		25.84	59.24	99.66	146.53	199.49	258.63	319.15	380.77	443.24	506.37
Total Fixed Liabilities (D)	**224.83**	**250.68**	**284.07**	**324.49**	**371.36**	**424.33**	**483.46**	**543.98**	**605.60**	**668.08**	**731.20**
Total Liabilities (C+D)	**224.83**	**258.68**	**293.07**	**333.49**	**381.36**	**434.33**	**494.46**	**554.98**	**616.60**	**679.08**	**742.20**

6.12 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. The Break-even percentage indicates whether the fixed costs are being covered by the revenue generated from the operations, as well as profits are being generated after paying for such fixed costs. 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 25: Break Even Point

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	102.60	109.44	116.28	123.12	129.96	136.80	136.80	136.80	136.80	136.80
B. Variable costs										
Consumables	2.70	2.88	3.06	3.24	3.42	3.60	3.60	3.60	3.60	3.60
Utilities (power- variable charge)	4.29	4.57	4.86	5.15	5.43	5.72	5.72	5.72	5.72	5.72
Interest on WC Loan	0.88	0.99	0.99	1.10	1.10	1.21	1.21	1.21	1.21	1.21
Repair & Maintenance	4.65	4.96	5.27	5.58	5.89	6.20	6.20	6.20	6.20	6.20
Manpower (Direct)	9.60	10.24	10.88	11.52	12.16	12.80	12.80	12.80	12.80	12.80
Total Variable Cost (B)	22.12	23.65	25.07	26.59	28.01	29.54	29.54	29.54	29.54	29.54
C. Contribution (A-B)	80.48	85.79	91.21	96.53	101.95	107.26	107.26	107.26	107.26	107.26
D. Fixed Overheads (Cash)										
Manpower (Indirect)	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Utilities (Power - fixed charges)	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
Rent	2.40	2.64	2.90	3.19	3.51	3.87	4.25	4.68	5.14	5.66
Insurance	1.09	0.93	0.79	0.67	0.57	0.49	0.41	0.35	0.30	0.25
Misc. Expenditure	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Sub-total (D)	12.22	12.31	12.43	12.61	12.82	13.09	13.40	13.77	14.18	14.65

E. Fixed Overheads (Non-cash)										
Depreciation	32.75	27.81	23.64	20.10	17.09	14.53	12.36	10.51	8.93	7.60
Preliminary & Pre-operative expenses written off	0.70	0.70	0.70	0.70	0.70	0.00	0.00	0.00	0.00	0.00
Sub-total (E)	**33.45**	**28.50**	**24.34**	**20.80**	**17.79**	**14.53**	**12.36**	**10.51**	**8.93**	**7.60**
F. Total Fixed Overheads (D+E)	**45.67**	**40.81**	**36.77**	**33.40**	**30.61**	**27.62**	**25.76**	**24.27**	**23.12**	**22.25**
Break-even point (F/C)	**57%**	**48%**	**40%**	**35%**	**30%**	**26%**	**24%**	**23%**	**22%**	**21%**

Book break-even is achieved at 57% (of operational capacity at 75%) and at 48% (of operational capacity at 80%). The operation of the CFC is expected to break-even and realize profit from 1st year of operations. Therefore, very low risk is involved in the project.

Moreover, the SPV members have the potential to run the facility for longer than one shift resulting in enhanced capacity utilization and generation of more revenues. In that case, project will break even earlier than estimated. Additionally, the approach has been to develop projections based upon conservative estimates (costs on a higher side and user charge/ revenues on a lower side) whereas, in real the revenues may be far higher.

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6.13 .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 26: Financial Analysis

FEASIBILITY		
S. No.	**Particulars**	**Estimates**
1	BEP (cash BEP at initial operating capacity of 75%)	57%
2	Av. ROCE (PAT/CE)	30.83%
3	Internal Rate of Return (IRR)	26.15%
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. 186.56 lacs) at a conservative project life of 10 years
5	Payback period	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 27 below:

Table 27: 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**	**AVERAGE**
ROCE = EBIT/Capital Employed											
ROCE	15.87 %	20.44 %	25%	28.56 %	32.2 2%	35.96 %	36.79 %	37.45 %	37.96 %	38.35 %	31%

The average value of ROCE is 30.83% rounded off to 31%. This indicates the high techno-economic viability of the project should the government contribute a significant portion of the project cost as grant. Capital employed includes both the grant component as well as SPV contribution to the project.

The Net Present Value (NPV) estimated at a discount rate of 10% is INR 186.56. However, 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 26.15% (at a conservative project life of 10 years). This substantiates the viability of the project.

6.14 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.

6.15 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 fabrication 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; for instance, in terms of pursuing several joint efforts, registering the SPV, 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 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 28 below:

Table 28: 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%)	56.75%	60.61%	64.94%	70.05%
2	Internal Rate of Return (IRR)	26.15%	24.03%	21.71%	19.44%
3	Av. ROCE (PAT/CE) (with Grant)	30.83%	28.07%	25.18%	22.41%
4	Net Present Value (at a discount rate of 10 per cent) - incorporating viability gap funding (grant) GoH	186.56	159.17	130.64	103.15

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

6.16 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 @ INR 224.83 lakh based on estimates and quotations.

2. To finance the project, a total of INR 224.83 lakhs is required. The financing will consist of grant from government to Haryana and contribution by SPV.

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

4. The Registered SPV will manage 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% third year and 100% from 6^{th} years onwards. This is a conservative estimate for first 6 years as SPV members alone could avail of over 100 per cent of the installed capacity on single-shift basis.

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

8. Repairs and maintenance is provided @ 2% of building cost and @ 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 required for the CFC shall cost at INR 3000 as security deposit and service charge per kW connected load as per the regulatory norms in Haryana.

11. Fixed charges per kW of electric connection shall be charged @ INR 173 and variable charges @ INR 7.5 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.

14. Provision for income tax has been made @ 25.75% including surcharge. This is the rate prescribed for Private Limited Companies as per the recent Budget 2018.

15. 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 6 months upon receipt of final approval of grant-in-aid assistance from the Government of Haryana under mini cluster 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 BoD 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 6 months involves several activities. The schedule is elaborated in the table 29 below:

Table 29: Project Implementation Schedule

Activity/Month	1	2	3	4	5	6
Collecting Contribution from SPV/ stakeholders						
Receipt of final approval from Govt. of Haryana						
Formation of purchase committee						
Seeking latest quotations from manufacturers						
Purchase of Machinery and equipment						
Installation and trial run of machinery and equipment						
Arrangement for working capital						
Monitoring of the project by PMC						
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 12 units are participating in the SPV and all these units have agreed to contribute towards the SPV share of the project cost. 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 time and as per final approval from Government of Haryana.

5. **Memorandum and Articles of Association of Registered Company:** MOA and AOA are 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**: Building is being identified by the SPV for the proposed CFC at Dabwali in Sirsa district. Total area of building is 10,000 sq. ft. SPV will take it on lease after the final approval of the project.

7. **Availability of Requisite Clearances:** All necessary required clearances will be procured by the SPV. Electricity is already available in the area and the proposed CFC can easily be 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:

- Electrical works
- 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 site 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 and status reports and providing directions accordingly.

The Project Management Committee will look after the project under Mini Cluster Scheme to be implemented under the state's Enterprise Promotion Policy 2015.

The Project Management 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. Deputy Director, DIC Sirsa
iii. HSIIDC estate officer
iv. Directors of related SPV
v. EY Cluster Development Expert under MSME project

In addition, for implementing the Fabrication Cluster, Sirsa CFC project, a Project Management Committee (PMC) comprising the Deputy Director, DIC, Sirsa, and representatives of SPV, 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 DIC Sirsa.

Conclusion

8. Conclusion

The micro sheet metal fabrication units of Sirsa are dependent on manual, low capacity and obsolete technologies for production and are barely surviving due to intense competition from large firms. The increasing costs of raw materials coupled with high production costs is driving many micro players out of the market. The micro units do not have these machines and hence are unable to procure orders from MNCs. To add to their woes, the micro and small units are unable to produce quality products for the biggest market segment in the region.

Against this backdrop, it is inevitable to support the micro fabrication units in Sirsa to adopt modern cutting, grinding, welding and machining machines. This will reduce their processing costs significantly while increasing the quality of their produce.

The future of fabrication industry is bright. Fabrication segment is poised to grow at a steady rate with major applications being in engineering and consumer goods. Several factors are enhancing the demand and supply of fabricated products in India such as high growth of end-user industry, dynamically changing lifestyles, ready to use products, etc. Particularly in the Sirsa region, the market possibility for high quality fabricated products is promising. The only constraint is the lack of technologies and related infrastructure, which can be removed by setting up a CFC. The cluster firms have not been able to obtain bulk orders from large customers due to lack of quality, production capacity and poor quality of produce. The technologies required for upgradation are extremely expensive and any individual units in the cluster cannot adopt the same. Hence, the following facilities have been proposed in the CFC:

- Value added punching facilities
- Value added machining facilities
- Value added automatic powder coating facilities

The total project cost (including plant/machinery and buildings) is estimated to be INR **224.83 lakhs**. The project shall be implemented by the SPV '**ELAY Sheet Fabrication Pvt. Ltd.**' which has been constituted by the cluster firms. A number of capacity building programs and exposure visits 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 PPP mode. The building for the project has already been identified by the SPV and shall be acquired immediately upon in final approval by State Government. The state industry department is envisaged to provide grant for setting up of the modern machines under the Mini Cluster Development scheme, Haryana EPP 2015. The SPV members have proposed to contribute INR 44.83 lakhs of the project cost. Support from Mini Cluster Scheme of the State Government of Haryana is envisaged for INR 180.00 lakh. ICICI Bank will provide working capital requirement for the project. The project is financially viable and is expected to generate enough revenue to ensure its sustainability.

Annexures


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Entrepreneur
GROW
options
IDEA
GALA
passionate

9. Annexures

Annexure 1: DSR Approval Letter

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/Sheet Metal Fabrication/Sirsa/ 20584-A
Dated:- 11.09.2018

Subject: **Approval of Diagnostic Study Report (DSR) and directions for preparation of Detailed Project Report (DPR) of Sirsa Sheet Metal Fabrication Cluster.**

Kindly refer to the subject cited above.

It is informed that the Diagnostic Study Report (DSR) of Sirsa Sheet Metal Fabrication 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/Sheet Metal Fabrication/Sirsa/ 20585-A Dated:- 11.09.2018

A copy of the above is forwarded to;

1. The Deputy Director, District Industries Centre, Sirsa for information please.
   Email:- industrysrs@hry.nic.in
2. SPV, Sheet Metal Fabrication Cluster, Sirsa 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:- lalit.bansal27@gmail.com

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

Annexure 2 (a): SPV Certificate of Incorporation

सत्यमेव जयते

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 ELAY SHEET FABRICATION PRIVATE LIMITED is incorporated on this Eighteenth day of October 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 U74999HR2018PTC076511.

The Permanent Account Number (PAN) of the company is **AAFCE2312M**

The Tax Deduction and Collection Account Number (TAN) of the company is **RTKE02518F***

Given under my hand at Manesar this Eighteenth day of October Two thousand eighteen .

Digital Signature Certificate
Mr PUNEET KUMAR DUGGAL

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:

ELAY SHEET FABRICATION PRIVATE LIMITED
NEAR DR.SUNIL GARG, STREET NO.01, WARD NO.02, MANDI
DABWALI, SIRSA, Sirsa, Haryana, India, 125104

* as issued by the Income Tax Department

Annexure 2(b): Copy of Memorandum of Association (MoA) & Article of Association (AoA)

THE COMPANIES ACT, 2013

COMPANY LIMITED BY SHARES

MEMORANDUM OF ASSOCIATION

OF

ELAY SHEET FABRICATION PRIVATE LIMITED

1st The name of the company is **ELAY SHEET FABRICATION PRIVATE LIMITED**.

2nd The Registered Office of the company will be situated in the State of **HARYANA**.

3rd (a) The objects to be Pursued by the Company on its incorporation are;

(I) To function as Special Purpose Vehicle (SPV) and Set up Common Facilities Centre(CFC) and other infrastructure activities for Fabrication, 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.

(II) 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.

(III) To act as a resource centre for development and strengthening network as Business Development Services related to Fabrication, 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.

(IV) To make available raw and packing material to all members of Fabrication, Engineering & allied industry at competitive rates by opening of raw and packing material bank.

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

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

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

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

(IX) No salary/interest/dividend shall be paid to any stakeholder of the company.

(X) No profit will be distributed amongst any member. All profit shall be ploughed back in the business & added to reserves & surplus. (ii) To carry on in India the business of marketing, promoting, franchising or dealing in any of the above activities , both in internal and external markets for any of the above purposes

(b) Matter, which are necessary for furtherance of the object, specified in clause 3(a) are:-

(1) To receipt of contract amount in foreign currencies & repatriate the amount out side India.

(2) To do all or any of the acts or things as mentioned in the main objects either as principals, contractors or otherwise and either alone or in conjunction with others.

(3) To remunerate any firm, person or body corporate rendering services to the Company, including without limitation, in relation to the promotion or formation of the Company, either by cash payment or by allotment to him or them of shares and securities of the Company as paid -up in full or in part or otherwise.

(4) To pay all costs, charges and expenses incurred or sustained in or about the formation, registration, promotion, incorporation, establishment and advertisement of the Company or which the Company shall consider to be preliminary including contracts entered into by the Company.

(5) To enter into contracts or arrangements or other dealings for more efficient conduct of the business of the Company or any part thereof and also to enter into any arrangement with any Government or Authorities or any persons or companies that may seem conducive to the main objects of the Company.

(6) To buy, sell, repair, alter, improve, exchange, let on hire, import, export and deal in all works, plant, machinery, tools, appliances, apparatus, products, materials, substances, articles and things capable of being used in any business which the Company is competent to carry on, or which may be required by any customer or person having dealings with the Company or which may seem capable of being profitably dealt with in connection therewith and to manufacture, experiment with, render marketable and otherwise deal in all products and services incidental to any of the businesses carried on by the Company.

(7) To lease, sub-lease, hire, purchase, license or otherwise acquire and/or sell, dispose of, construct, alter, modify, develop or otherwise deal in any properties, factories, shades, offices, guest houses, employee accommodation, godowns, warehouses, or other structures for housing and carrying on the businesses of the Company or for its employees, clients or other persons or for any other persons or for any other purpose as the Board of Directors may think expedient for the benefit of the Company.

(8) To enter into, undertake and execute contracts or other arrangements with any parties for any transactions, including the provision and supply or use of materials, machinery, equipment, articles or other products and/or services necessary for or otherwise required for or incidental to carrying out the objectives of the Company.

(9) To recruit, train and develop staff, organize seminars, training programs and conferences for employees, customers and the general public.

(10) To recruit, train and develop a pool of technical, managerial and administrative personnel including staff, employees, agents, for the Company or any subsidiary, affiliate or group companies or any other company, firm or other person, particularly where such companies, firms or persons are engaged in any business related to the business of the Company.

(11) To employ, engage, appoint, retain or otherwise procure, suspend or terminate the services of professionals, consultants, engineers, design consultants, technicians, legal and financial advisors, or other experts and to imbibe innovation and modern management techniques in the functioning and businesses of the Company.

(12) To retrench, lay-off, suspend, terminate the appointment of or dismiss executives, managers, assistants, support staff and other employees and to remunerate them at such rates as may be thought fit.

(13) To adopt such means of making known the articles, goods, products, appliances manufactured or dealt in or processes and services provided by, or at the disposal of the Company, as well as properties, assets and effects of the Company as may seem expedient, in particular by advertising in the press and through billboards, hoardings, motion pictures, by broadcasting, telecasting or by publication of books, periodicals and any other material convenient to the Company, by participating in trade fairs, exhibitions and by granting prizes, rewards and donations.

(14) To appoint dealers, sub-dealers, agents, sub-agents, distributors, sole selling agents, sole concessionaires, either in India or any place in India, for the efficient conduct of the bus iness of the Company, and remunerate them for their services.

(15) To take and/or provide discounts or to approve other terms of payment or credit in relation to any sums owing to or due from the Company and to impose or agree to pay any interest thereon or to write off any such sums or parts thereof.

(16) To pay for any property or rights acquired, either in cash, against debentures, or in fully or partly paid shares, or by the issue of securities, or by providing services and generally in such terms as may be determined and agreed upon.

(17) To carry on research and development activities on all aspects related to the business and objects of the Company.

(18) To undertake all types of technical, economic, and financial investigations and aid or assist or enter into partnership with any institution, university, company, partnership , firm or person or persons conducting such research or study and to subsidize, endow and assist workshops, libraries, meetings, lectures, and conferences and do suc h other acts to generally encourage, promote and reward studies, researches, investigations, experiments, tests and inventions of any kind that may be considered to assist any of the businesses of the Company.

(19) To identify projects, project ideas, to prepare profiles, project reports, and undertake market research, feasibility studies, per-investment studies and investigation of industries on a micro and/or macro level and to render appropriate services, to identify scope and potential for economic and industrial development in any particular geographical area or location whether in India or abroad.

(20) To acquire from any person, firm or body corporate, whether in India or elsewhere, technical information, know -how, processes, engineering, manufac turing and operating data, plans, lay-outs and blue-prints useful for the design, manufacture, erection and operation of plant and machinery, required for any of the businesses of the Company and to pay remuneration thereof in any currency by way of lump-sum or instalments or fees or royalties.

(21) To develop and/or furnish to any person, firm or body corporate whether in India or elsewhere, technical information, know-how, processes, engineering, manufacturing and operating data, plans, lay-outs and blue-prints useful for the design, manufacture, erection and operation of plant and machinery, required for any of the businesses of the Company and to obtain remuneration thereof in any currency by way of lump-sum or instalments or fees or royalties or through any other arrangement.

(22) To apply for, purchase, or otherwise acquire, protect or prolong any patent, design, concessions, trademarks, copyrights and the like, conferring an exclusive or non-exclusive or limited right of use, or any secret or other information and/or systems, processes of the Company or which the Company may develop or acquire or propose to develop or acquire.

(23) To apply for, purchase or otherwise acquire brand names/service marks for the products manufactured and the ser vices rendered by the Company, from any company, firm, or other person anywhere in the world, particularly international brand names/ service marks of the Company's holding or group companies.

(24) To expend money for improving or seeking to improve any patents, rights, inventions, discoveries, or information and/or systems, processes of the Company or which the Company may develop or may acquire or propose to develop or acquire.

(25) To use, exercise, develop, sell, assign, grant licenses or otherwise turn to account the property, rights and information so acquired.

(26) To establish and maintain or procure the establishment and maintenance of any non-contributory or contributory pension, superannuation, provident, welfare and education funds and trusts for the benefit of any person who is or was at any time in the employment or service of the Company or any subsidiary or affiliate of the Company, or who is or was at any time a director of the Company or of any such other company as aforesaid and the spouse, family and dependents of any such person.

(27) To provide for the welfare of employees or ex-employees of the Company and their spouses or the dependants of such persons by grant of money, pensions, allowances, bonus or other payments or by contributing to other associations, institutions, funds or trusts and by providing or subscribing or contributing towards places of instruction and recreation, hospitals and dispensaries, medical and

other assistance as the Company may think fit.

(28) To purchase, hire or use all kinds of vehicles including cars, heavy transport vehicles, and aircraft, for the purpose of transportation of equipment, materials, employees and managerial personnel or for any other purpose.

(29) To acquire and hold one or more memberships or membership privileges in stock/security exchanges, commodity exchanges, clearing houses in any other trade or service associations which memberships, or membership privileges are likely in any manner to facilitate the conduct of the Company's business.

(30) To purchase, take on lease, exchange, mortgage, charge, hypothecate, encumber, hire or otherwise acquire or dispose of any movable or immovable property including lands, buildings, and flats of any description in India or elsewhere.

(31) To purchase, take on lease, exchange, mortgage, charge, hypothecate, encumber, or otherwise acquire or dispose of any other rights and privileges which the Company may think fit, and in particular of shares, debentures, or securities of any other company and to give any warranties in connection therewith as the Company shall think fit.

(32) To deal in, sell, mortgage, let out or otherwise dispose of the businesses, undertaking or all or any of the property and assets for the time being of the Company, or any part thereof, for such consideration and on such terms, as the Company thinks fit, particularly for shares, debentures, or securities of any other company and to give any warranties in connection therewith as the Company shall think fit.

(33) To promote, invest or assist any companies for the purpose of acquiring all or any of the property, rights and liabilities of such companies, which may seem beneficial to the Company.

(34) To enter into joint venture, partnership, or any other arrangement for joint working in business, sharing profits or for co-operation or for mutual assistance or form, promote, subsidize and assist companies and partnerships of all kinds with any person, firm or company or to acquire or carry on any other business (whether manufacturing or otherwise) auxiliary to the business of the Company or connected therewith or which may seem to the Company capable of being conveniently carried on in connection with the above, or calculated directly or indirectly to enhance the value of or render more profitable any of the Company's property or to amalgamate with any person, firm or company carrying on or about to carry on any business or transaction included in the objects of the Company or any other similar business, in India or abroad.

4th 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.

5th The Share Capital of the Company is Rs. 20, 00, 000/- (Rupees Twenty Lacs only) divided into 2,00,000 (Two Lacs) shares of Rs 10 (Rupees Ten only) each.

THE COMPANIES ACT, 2013
COMPANY LIMITED BY SHARES
ARTICLES OF ASSOCIATION
OF
ELAY SHEET FABRICATION PRIVATE LIMITED

(1) In these regulations --

(a) "the Act" means the Companies Act, 2013,

(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.

PRIVATE COMPANY

(3) The Company is a "private company" which by its articles,—

(i) restricts the right to transfer its shares;

(ii) except in case of One Person Company, limits the number of its members to two hundred:

Provided that where two or more persons hold one or more shares in a company jointly, they shall, for the purposes of this clause, be treated as a single member:

Provided further that—

(A) persons who are in the employment of the company; and

(B) persons who, having been formerly in the employment of the company, were members of the company while in that employment and have continued to be members after the employment ceased, shall not be included in the number of members; and

(iii) prohibits any invitation to the public to subscribe for any securities of 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 thecompany 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 beentitled 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 furtherspace on the back for endorsement of transfer, then upon production and surrender thereof to the company, 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 percent. or the amount of the commission paid or agreed to be paid shall be disclosed in the manner required by that section and rules 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 rightsattached 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 to 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 orother 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 shares ranking *paripassu* therewith.

8. Subject to the provisions of section 55, any preference shares may, with the sanction ofan 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 be wholly or in part exempt from the provisions of this clause.

(ii) The company's lien, if any, on a share shall extend to all dividends payable and 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 installments.

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.

(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 andrules made there under, 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 jointholder, and his nominee or nominees or legal representatives where he was a sole holder, shall be the only persons recognised 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 ofa 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 been 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

(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 non-payment 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. (i) 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 ofsections 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.

1. ARUN KUMAR SHARMA
2. LALIT BANSAL

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 byor 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 equalising 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 may be 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 whattimes 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 companyagainst 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.

Annexure 3: Verification of units by DIC, Sirsa

From

Deputy Director,
Distt. Industries Centre,
Sirsa.

To

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

Memo No./SRS/DIC/ 4100
Dated: 27-07-2018

Subject: **Application for assistance under Mini Cluster Scheme for Sheet Metal Fabrication Cluster at Dabwali, Distt. Sirsa.**

Please find herewith application for documents submitted by Sheet Metal Fabrication Cluster, Dabwali for further action, please.

The following information/document attached herewith:

(i) All the 12 units have been verified & have filled the UAM.

(ii) The application form submitted by the SPV has been duly checked for completeness and the information contained therein has been verified.

(iii) List of products manufactured, address, contact number, has been mentioned in the application form.

Here, it is informed that above said SVP has submitted the Air Cooler Cluster and same has been forwarded to your good office vide this office memo No. DIC/SRS/3946 dated 13.07.2018 and on dated 27.07.2018 above said application/cluster has revised the name i.e. Sheet Metal Fabrication at Dabwali and units mentioned above at sr. No. (i) has already been verified by this office.

The demand of 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 the policy guidelines.

This is for your kind information and necessary action, please.

Encls. As above.

1. Revised application with Annex.-I & Annex.-II

27/7/18

Deputy Director,
District Industries Centre,
Sirsa.

List of SPV Members for White Goods Cluster, Sirsa

S.No.	Contact Person	Company Name	Contact Number	Address of unit	UAM Number	Products of the cluster	Investment in Plant & Machinery	Turnover	Emp. as per UAM
1	Arun Kumar	Shaktimaan Industries	9416395924	74, Ward No. 14 Mandi Dabwali	HR 17A0002363	Coolers, Almirah	15 Lakh	20 Lakh	8
2	Lalit Bansal	Leader cooler Industries	9466127684	Opp. N.S.M. Park, G.T. Road Dabwali	HR17A0002362	Coolers, Almirah	17 Lakh	25 Lakh	10
3	Ashwani Kumar	Radhe Radhe Steel Industries	9466748706	Gali No.5, Ward No.3, Mandi Dabwali	HR17A0002385	Almirah	15 Lakh	30 Lakh	9
4	Gurmeet Singh	Gurmeet Engg. Works	9996831378	Opp. Khalsa School, G.T. Road, Mandi Dabwali	HR17B0002288	Coolers, Almirah	40 Lakh	41 Lakh	15
5	Rajiv Kumar	Himshikha Udyog	9466473437	Ward No. 6, Kalanwali	HR17A0000335	Almirah	12 Lakh	22 Lakh	1
6	Davinder Jain	Vardhman Industries	9316209091	Ward No.1, Mandi Dabwali	HR17A0002354	Coolers, Almirah	14 Lakh	21 Lakh	10
7	Kunj Bihari	Diksha Industries	9416278260	Ward No. 3, Mandi Dabwali	HR17A0002355	Almirah	20 Lakh	25 Lakh	8
8	Bhupinder Kumar	Aarav Industries	9023811002	Ward No. 2, G.T.Road, Mandi Dabwali	HR17A0002360	Coolers, Almirah	15 Lakh	22 Lakh	6
9	Abhishek Sharma	Abhi Enterprises	7876243638	Meena Bazar Road, Mandi Dabwali	HR17A0002356	Coolers	10 Lakh	18 Lakh	5
10	Niranjan Dass Garg	Garg Industries	9354464100	Ward No. 8, Mandi Dabwali	HR17A0002365	Coolers	12 Lakh	19 Lakh	3
11	Vikas Sharma	Vikas udyog	9354020035	Valmiki Chowk, Dabwali	HR17A0002359	Coolers	11 Lakh	20 Lakh	6
12	Chanakay Sharma	Madhav Enterprises	9017137001	Ward No.8, Jai Bharat Gali, Mandi Dabwali	HR17A0002386	Coolers, Almirah	20 Lakh	28 Lakh	7

Deputy Director
Distt. Industries Centre
SIRSA

For Leader Cooler Industries

Partner

Scanned by CamScanner

Annexure 4: Building Availability Proof (On Lease Basis)

Mobil No. 9356886743

M/S. SHRI SAI INDUSTRIES

Ref. No.SRS/Cluster/001 Dated: 27th Oct. 2018

To,

The Director, Industries
Department of Industries & Commerce
Govt. of Haryana
Sector 17, Chandigarh

Subject: Regarding building lease for sheet metal fabrication Cluster, Dabwali Dist. Sirsa.

Reference: Cluster project to establish Common Facility Centre (CFC) under State Mini Cluster scheme of Government of Haryana

Dear Sir,

This is to confirm that I amDeepak Kumar Gargwilling to provide my building situated Near KajePoultary Farm, 6 Km milestone, Dabwali Sirsa road, Village Dabwali Dist. Sirsa, on a 10 year irrevocable lease to the Sheet Metal fabrication Cluster Dabwali Dist. Sirsafor the establishment of a Common Facility Centre, provided the cluster is approved by the Government of Haryana. The area which will be provided is10000square feet and shall be provided on a lease basis with rent of Rs. 20,000 per month for the first year, with a standard annual increase as per the market norms. The said building is out of controlled area. Thus, there is no need of CLU.

Yours sincerely,

23/10/18

Deepak Kumar Garg

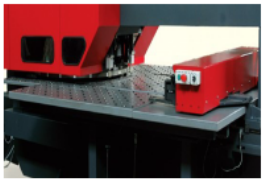
Chautala Road, near Jain mandir, MandidabwaliDist Sirsa.

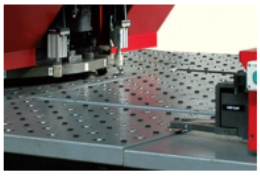
Annexure 5: Machinery Quotations

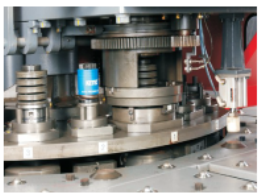
AMC AUTOMATION

CNC TURRET PUNCH PRESS

TANTUS 256 SERIES







1. **TANTUS**

Tantus hydraulic punch press has O frame construction. The punching pressure is generated by a hydraulic ram, powered by integrally mounted hydraulic pump in H series machines. The M series machines are driven by mechanical clutch & Ram arrangement.

The machine is free standing on anti vibration pads. There is no need for special foundation or necessity of maintaining alignments at site. The machine can be straightaway put to operation. However most users in India prefer to put the machine on a proper foundation.

2. **SHEET SUPPORT TABLE**

Sheet support table is provided with equispaced caged ball transfer units for smooth sheet movement. Sheet holding is through low profile clamps which are able to pass directly through the turret. This feature allows free point to point movement and considerably reduces clamps safety zones. Two numbers sheet clamps are provided with the machine as standard. Extra clamps offered under optional accessories can be used.

Extension tables - free standing table units are available as an option for supporting large sheets.

3. **SHEET MOVEMENT:**
Sheet positioning to an accuracy of +/- 0.10 mm is achieved by carriages moving on linear bearings in both X and Y axis through precision ball screws arrangement and powered by AC servo motors.

4. **COMPUTER CONTROL:**

The CNC control, video screen, control keys are mounted separately on a vertical console.

The CNC control Fanuc is the most suitable compact package for CNC turret punch operations.

General programming is "Menu Driven" and very simple to operate. The operator is offered choice which leads progressively through programming, checking, operating or diagnostic sequences. Apart from conventional approach to writing programmes the Fanuc control allows for mimic or teach-in-modes. In addition the Fanuc provides parametric programming for families of components and for programmes containing variable algebraic functions.

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AMC AUTOMATION

CNC TURRET PUNCH PRESS

TANTUS 256 SERIES

The Fanuc control can be equipped for off line programming with IBM compatible Personal Computers as an optional facility. Two way DNC link for monitoring, control and programme transfer can also be offered.

5. **TOOLING**

Large sized turrets using AMADA type thick turret tooling can be supplied. Turrets incorporate replaceable tool holder bushings which increases the life of the turrets. The turrets incorporate up to 4 auto index stations and multi-tools giving flexible production power for the modern sheet metal working.

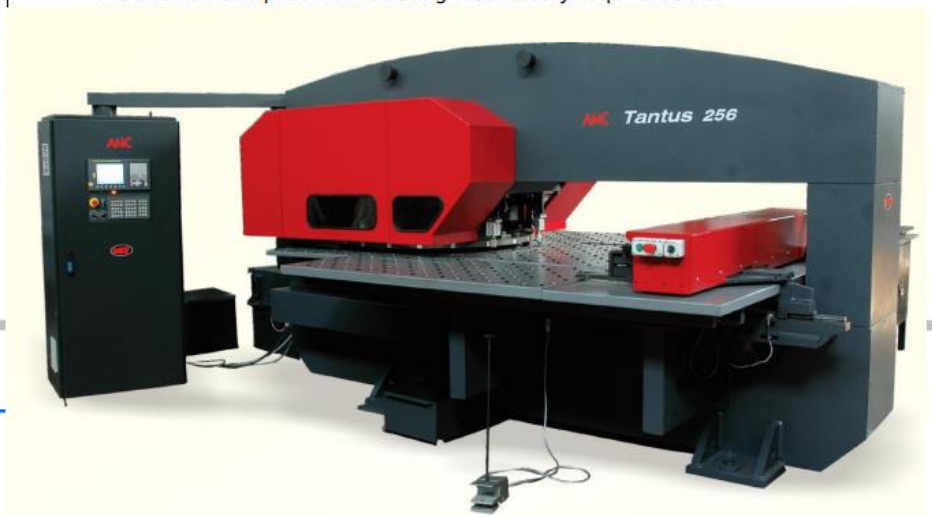
In case the machine ordered includes 1 set of tools, the order of the same MUST be placed with us within 30 days of receipt of the order of the machine. If this is not the case, Delivery of the tools can be delayed.

The order of the tools must be clear and confirmed with all technical details.

6. **SAFETY**

During the design of the machine, proper attention has been paid to safe operation and the product is manufactured to conform to existing safety regulations. The machine is equipped with a series of electronic sensors that are constantly monitored by the computer for satisfactory operation. Safety lock switches are on all covers, and any malfunction is displayed on the computer screen in plain English.

It is the responsibility of the individual user to ensure that each installation complies with existing local safety requirements.



AMC AUTOMATION

CNC TURRET PUNCH PRESS

TANTUS 256 SERIES

7. TECHNICAL SPECIFICATION AND PRICE:-

Description	Unit	TAN-256H (BB)			
Throat	mm		1250		
Tonnage	ton		25		
Max. Sheet Size with one auto reposition (depth x width)	mm		1250X5000		
Max. feed rate	m/min		70/105		
Max. material thickness (Mild Steel)	mm		6.35		
Min. Material thickness	mm		0.8		
Punching accuracy	mm (±)		0.1		
Repeatability			+/-0.03		
Turret rotation		----------SERVO BI-DIRECTIONAL----------			
Punching times	p/min		600		
Hit rate at 1 mm pitch	SPM		370		
Hit rate at 25 pitch, 8 mm stroke			200-230		
Offline software		----------METALIX----------			
Oil cooler		----------AIR OIL COOLER----------			
CNC		----------FANUC (Oi-PF)----------			
Power Consumption	KVA		20		
No. of Clamps			3		
Turret layout		20 Stations – 2 AI Station (standard) 2 of 50 mm, 4 of 88.9 mm*, 4 of 50 mm, 10 of 32 mm *88.9 dia stations can be converted into Multi tool station or AI station size C.			
Turret accessories		1 set			
Flexible safety zones			YES		
Clamp safety facility			YES		
Aligning punch & dies			YES		
Tool dismantling fixture			YES		

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CNC TURRET PUNCH PRESS

TANTUS 256 SERIES

PRICE (EX WORKS- Delhi)
TAN-256H(BB)
81,50,000.00

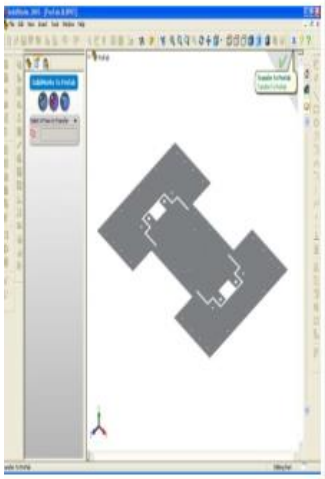
9. CAD/CAM Nesting software – METALIX

cncKad Software supports the entire design-to-production cycle and is user friendly. This is a comprehensive software package for AMC Punch Machines and is being used to manufacture high quality products. This software is a powerful solution for quick creation of efficient NC programs with precision and ease, which are tailored specifically for the AMC machines. No CNC programming experience is necessary in order to use this software.

The **cncKad Software** has optimal material utilization with Auto Nest best fit nesting solution. It has advanced technology which combines drafting and processing in the same module. The files can be transferred from SolidWorks®, SolidEdge®, Autodesk Inventor® and ProE® using a real-time associative link as well as they can be read directly from AutoCAD®;. This means the files in DXF, IGES, CADL, DWG and other standard file formats can be loaded in cncKad.

The **cncKad Software** package offers a full range of CAD/CAM capabilities, designed to minimize programming time for CNC machines. Using powerful commands a drawing can be constructed quickly and easily. This drawing can then be processed. Full editing, communications, tool library, backup and file handling are also included as well as a multiple parts generator that has an auto-punch facility.

The **cncKad Software** provides an integrated system covering the complete cycle of CNC operations, and includes the following modules:

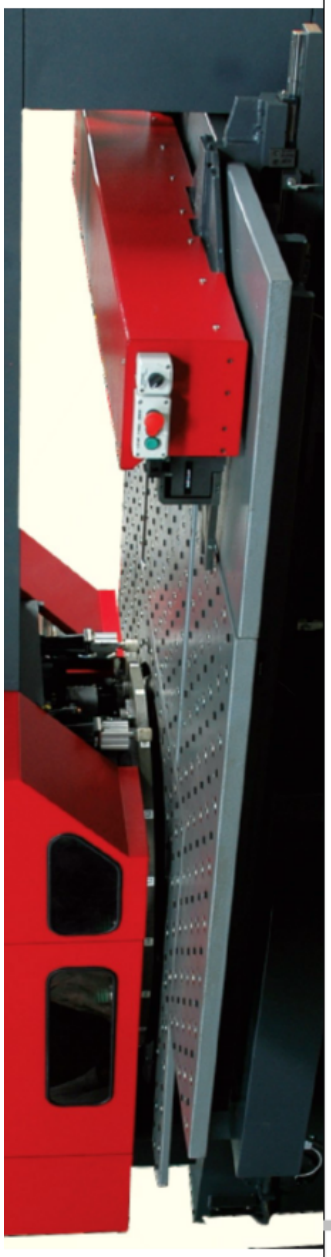


- **Drafting** – powerful, yet easy to use, 2D drafting module, that includes a full set of drafting tools as well as special sheet-metal drafting aids: notching, chamfering, filleting, shapes recognition, geometry validation, true type fonts, import from other formats.
- **Processing** – automatic and interactive graphical processing for punch technology including: automatic reposition, clamp-avoidance, stripes, trimming, support for Wilson Wheel family, minimizing tool rotation, detailed data reports. This module supports also auto-punch, special tools, auto-index, reposition, common cuts.
- **AutoNest** – automatic "true-shape" nesting for optimal material utilization, which includes: interactivity, grouping, grill, hole- filling, multiple-sheets, as well as data reports.
- **Post-Processing** – advanced Post-processors generate an efficient NC code including: macros, optimized tool path, minimal turret rotation, as well as support for machine operations such as oiling, vacuum and ram-rate.
- **Simulation –** graphic simulation for any NC program enables easy editing of programs while viewing the processed sheet. The NC program is automatically checked for errors, such as: missing parameters, clamp errors, over-travel errors, etc.
- **DNC** – support for uploading and downloading of NC files to machine as well as support for batch loading and for extracting NC files from the machine controller.

AMC AUTOMATION

CNC TURRET PUNCH PRESS

TANTUS 256 SERIES



NOTE

1. Production Trials - The services of our technician/engineer will be provided for installation and production trials of the machine free of charge for a total of 6 working days. Any additional period if required will be against an extra charge.

2. The Electrical Equipment fitted on our machines is suitable for operation on 415 +/- 5% volts, 3 phase, 50 cycles, A.C. supply as per Indian Standard specifications. Electrical Equipment for other voltage can also be fitted on request against an extra charge.

TERMS AND CONDITIONS:

PRICES

All the prices quoted above are exclusive of taxes and levies. Our quotation is based on current prices of raw materials and cost of labour. We reserve the right to charge the prices prevalent at the time of dispatch should there be any change in prices or raw materials and cost of labour.

TAXES AND DUTIES

IGST @18% will be extra.

DELIVERY

Ex. works in about 3-4 months after receipt of your clear and confirmed order and settlement of all technical details. The delivery period is not binding should any cause beyond our control upset our manufacturing programme.

GUARANTEE

All our machines carry a guarantee for a period of one year from the date of dispatch against faulty design, defective materials and workmanship. Our detailed guarantee will be furnished along with the machine.

PAYMENT

1. **The machine, accessories and spares:**
   a 40% advance with order and balance against proforma invoice after inspection at our Works and prior to dispatch.

OR

   b 40% advance with order and the balance against documents through bank.

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TANTUS 256 SERIES

VALIDITY

The prices are valid for your acceptance for a period of 15 days from the date of our offer.

INSPECTION

To be carried out at our Works before dispatch of the machine. You are welcome to inspect the machine before dispatch at our works.

FREIGHT & INSURANCE

Our terms of delivery are Ex Works Delhi as such the Insurance of the consignment, if desired, would be arranged by you. However, if you like, we can arrange the same and it will be to your account.

ORDER CANCELLATION

Buyer cannot cancel orders without first reaching an Agreement in writing with SELLER covering all damages. If cancellations or modification is agreed to by SELLER, BUYER agrees to pay all engineering and other expenses, Incurred by SELLER and in any case not less than 10% of the agreement price in case of cancellation.

MANUFACTURER

AMC, Delhi
Please make the PO in the name of M/s. Ashok Manufacturing
Company Pvt.Ltd.
1-Canal Road, Vijay Nagar, Delhi-110 009.

For Ashok Manufacturing Company Pvt. Ltd.

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FLOWMECH ENGINEERS PVT. LTD.

PLOT NO. 641, MUNDKA, MAIN ROHTAK ROAD
NEW DELHI-110 041, INDIA.
MOBILE: 9310004368/9810675140 EMAIL:
INFO@FLOWMECH.IN/ADMIN@FLOWMECH.IN

REF: FME/AKM/2018-2019/M564 11-09-2018

TO,
MR. LALIT BANSAL
M/S LEADER COOLER INDUSTRIES
MANDI DABWALI DISTT. SIRSA
HARYANA.
M: 9466127684
EMAIL: lalit.bansal27@gmail.com

SUB: OFFER FOR 600 TON (300+300 TON) HYDRAULIC DEEP DRAW PRESS WITH BLANK HOLDER FOR M.S COOLER TANK DRAW.

Dear Sir,

This has reference to the telephonic discussion you had with the undersigned regarding your requirement for 600 TON (300+300 TON) HYDRAULIC DEEP DRAW PRESS WITH BLANK HOLDER FOR M.S COOLER TANK DRAW. In this connection, we are enclosing herewith our most suitable and economical offer for your kind consideration.

We hope you will find the above offer as per your requirement. In case, if you require any other information/ clarification, please feel free to write us.
We are awaiting your Valuable Purchase Order.

Thanking You,

Yours faithfully,
For FLOWMECH ENGINEERS PVT. LTD.

(A.K MITTAL)
DIRECTOR

QUOTATION

"FLOWMECH" make 600 TON (300 + 300 TON) HYDRAULIC DEEP DRAW PRESS FOR COOLER TANK DRAW COMPLETE WITH HYDRAULIC POWER PACK & PLC CONTROL ELECTRICAL PANEL, which will have the major technical details and specifications:-

01.	Type of the Press	:	Fabricated Box Type (Down Stroke)
02.	Total Capacity	:	600 Ton
03.	Main Ram Capacity	:	300 Ton
04.	Blank Holder Ram Capacity	:	300 Ton
05.	Main Cylinder Stroke	:	700 mm
06.	Blank Holder Ram Stroke	:	500 mm
07.	Day Light Gap	:	850 mm
08.	Bed Size	:	1500 x 1200 mm
09.	T-Slots Size	:	T-20
10.	Table Height from floor level	:	800 mm
11.	Ejector	:	Hydraulic
12.	Cycle Control	:	Through PLC
13.	Mode of Operation	:	Push Button having "Auto" & "Inch" Cycle

PUMPING UNIT:

The Press is equipped with 30 H.P. Hydraulic Pumping Unit which consists following items:-

01.	Motor	:	1 No. 30 H.P., 1440 RPM. 3 Ph. NGEF/ABB
02.	Pump	:	1 No. High & Low Pressure
03.	Sol. Dir. Control Valve	:	4 No's
04.	Non-Return Valve	:	2 No's.
05.	Relief Valve	:	3 No's.
06.	Unloaded Valve	:	1 No.
07.	Pressure Gauge	:	2 No's.
08.	Prefil Valve	:	2 No's.
09.	Pressure Switch	:	2 No's.
10.	Oil Reservoir	:	1 No. 800 ltrs.

Complete with Oil Level Indicator, Drain Plug, Filter, Breather and Pipe Line etc.

All components will be standard make like Yuken/ Rexroth / Denison/ Polyhydron/ Vickers/ ABB/ Siemens/NGEF/ Crompton used in the Power Pack.

GENERAL:

FRAME:

a. The Press is fabricated out of tested quality plates and is fully stress-relieved after welding.

b. The frame is accurately machine to receive the Cylinder.

c. The ram is provided adjustable guide with C.I. ribs for Blank Holder and Punch Slide.

d. 2 No's. Double Acting Hydraulic Cylinder are provided for Fast approaching and Return.

DOUBLE ACTING CYLINDERS

01. We are using IMPORTED HARD CHROME PLATED AND GROUND PISTON RODS, WHICH are made out of medium carbon steel cylindrically ground for accuracy, for long seal life, hard chrome plated for damage and corrosion resistance.

02. We are using IMPORTED STANDARD ASTMA-106 GR.B HONNED TUBES finished under 0.4µ RA value for smooth operation of the Cylinder and long seal life.

03. We are using Standard High grade cast iron (C.I.) piston with large bearing area, pilot fitted to the Piston rod and locked it.

04. The Cylinder assembly is complete with Rod seal, wiper seal, piston seal and 'O' ring to give leak proof operation. All Oil Seals and O-Rings used in our cylinder are IMPORTED AND REPUTED MAKE I.E. MERKEL, PARKER, VAKO, OMCO ETC.

BLANK HOLDER AND PUNCH SLIDE:

a. The Blank Holder and Punch slides are fabricated, design fully stress-relieved after welding.

b. T-Slots for T-20 size are provided for mounting of dies.

MAIN CYLINDER ASSEMBLY:

a. The main Cylinder is of steel fitted with Ram of forged steel fitted with Ram of forged steel main Cylinder is double acting type.

b. The Cylinder assembly is complete with gun metal bushed, chavron packing, wiper seal and 'O' ring to give leak proof operation.

c. Ram is grind to its full working length to give long life to the fabric packing.

BLANK HOLDER CYLINDER:

a. 8 Cylinder of capacity 37.5 Ton each are provided for movement of Blank Holder Slide. These all are single acting type.

b. Cylinder and Ram are machines out of forged steel material and are fitted with gun metal bushes and packing.

HYDRAULIC:

a. Our Offer include for necessary Hydraulic Power Pack, comprising of Motor, Pump, Sol. Directional Control Valve, Non-Return Valve, Filter, Pressure Gauge and safety devices. Hydraulic circuit has been designed for smooth and trouble free operation.

b. We hope includes for inter-connection pipes and pipe will be solid drawn steel to with stand high pressure.

c. However, our offer is exclusive of initial filling of Oil.

d. Working Pressure can be adjustable with the Pressure regulator valve provided in the circuit to set Press at different capacities for various jobs.

ELECTRICAL:

a. Our offer includes for all Electrical required for operation of the Press.

b. All Electrical are suitable for 400/440 Volts, 3 Phase, starter overload relay etc.

c. Control Panel is complete with PLC (PROGRAMMABLE LOGIC CONTROL) & TOUCH SCREEN DISPLAY, Control Switch, Fuses, Starter, Overload Relay, Voltmeter, Ampere meter, Selector Switch having "Auto" And "Inch" Cycle, Necessary Push Buttons etc..

CONTROL:

a. Operation of the Press is through Push Button.

b. Necessary Selector is provided having inching & single/ multi automatic cycle.

PRICE

Price for the above described 600 TON HYDRAULIC DEEP DRAW PRESS with PLC CONTROL is RS. 28,00,000/- (RS. TWENTY EIGHT LAKHS ONLY).

Thanking You,
Yours faithfully,
For FLOWMECH ENGINEERS PVT. LTD.

(A.K MITTAL)
DIRECTOR

TERMS & CONDITIONS:

PRICE:

The Price quoted above are Ex-works Delhi at our works and does not include any other Taxes. At present G.S.T @ 18% will be charged extra at the time of delivery (our G.S.T NO. 07AAACF3168K1ZJ). Insurance 0.5%, Packing & Forwarding @3%, Erection and commissioning @5% charge extra.

Freight charges will be in your account.

The above Price also not include erection commissioning supervision thereof, spares and any other civil work at site, which shall be charged extra. Any local support / arrangement like Crane etc. required for the erection & commissioning of the press shall be arrange by the purchaser

BANK DETAIL:

NAME OF BANK & BRANCH	:	HDFC BANK LTD. 27-WEST AVENUE ROAD PUNJABI BAGH, NEW DELHI-110026
A/C NUMBER	:	00912790000172
TYPE OF ACCOUNT	:	C.C
IFSC CODE	:	HDFC0000091
RTGS CODE	:	RTGS/NEFT/IFSC/HDFC 0000091

DELIVERY:

4 MONTHS from the date of Confirm Order along with advance.

TERMS OF PAYMENT:

40% advance along with the confirm order & balance against Proforma Invoice at the time of dispatch of the machine.

INSPECTION:

Inspection of the HYDRAULIC PRESS will be done at our works prior to despatch.

GUARANTEE:

6 months from the date of Commissioning or 12 Months from the date of supply whichever is earlier for any material/ manufacturing defects.

VALIDITY:

30 days from today thereafter, subject to our prior confirmation.

Thanking You,
Yours faithfully,
For FLOWMECH ENGINEERS PVT. LTD.

TECHPRO

9, New Market

Behind Narinder Cinema, JalandharCity – Punjab (India)

Ph: 0091 – 181 – 6542179 Fax 0091 – 181 – 4612179

Email : techpro@vsnl.com/info@techprohydraulics.com

NC/CNC Hydraulic Press Brakes

NC Hydraulic Shearing Machines

High Speed Deep Draw Hydraulic Presses

www.techprohydraulics.com

Ref/T/sales/PB 18-19/25915 PB

Dated: August 10, 2018

M/s Leader Cooler,

Mandi Dabwali.

Kind Attn: Mr. Lalit Bansal

This is with regards to your requirement of CNC Y X Hydraulic Press Brake, Further to the discussions you had with the Undersigned, we are pleased to submit our best proposal/quote as below.

A. CNC Y X Hydraulic Press Brake

Presentation

Techpro has taken the CNC press brakes to a high level by gathering precision, reliability, repeatability, flexibility, and ease of use.

All THPB press brakes are user friendly and can be designed according to the user's specific requirements.

Performance and precision required in Sheet Metal are achieved by using the most advanced and innovative engineering solutions ..

Angle Repeatability accuracy of the bending angle is ensured by the positive stop mechanism.

Main features of CNC with Delem Holland Make DA-41 Controller for Y and X axis Control Hydraulic Press brake

Direct Angle control Through DA-41 controller.

Multi Step Bending for X – Axis Control with AC Servo Motor driven Backgauge with

Ball screw and High precise LM Guides.

Cylinders with German Hydraulic Seals

Super-heavy duty back gauge fixed to the side frames of the machine, with the following CNC controlled axes:

Email : techpro@vsnl.com/info@techprohydraulics.com **www.techprohydraulics.com**

X axis with 500 mm Stroke

R axis pedestals with manual Up/Down movement, and with two back gauge fingers with micro adjustment.

WORKING OF Y – X PRESS BRAKE

The Basic Y – X Type Press Brake works on the principle of Positive stop Hard stoppeINR

The stroke of RAM or the angle of the JOB depends on the position of the positive stops.

The Ram will come down to the position of hard stoppers and will make pressure on hard stoppers irrespective of the sheet thickness and Die opening. This will ensure the repeatability of the Hydraulic Ram. The Positioning of the Hard Stoppers is controlled Manually with Manual Read Out according to the Job ParameteINR

The Ram is hydraulic Axis and has two speed movement. Fast speed upto adjustable Slow down point and slow speed up to bending point.

Technical Data

Model	**THPB-80**	
- Max. capacity	80	Ton
- Working length	3100	mm
-Distance between housings	2500	Mm
- Throat depth	250	mm
- Max. stroke - Max. open height	150 425	mm mm
- Ram speeds		
Approach	80	mm/s
Working	8	mm/s
Return	80	mm/s
- Motor power	7.5	H.P.

- Voltage: 3 phase, 400 V, 50 Hz		
- Back gauge		
X axis		
Travel	450	Mm

Ph: 0091 – 181 – 6542179 Fax 0091 – 181 – 4612179 **High Speed Deep Draw Hydraulic Presses**

Email : techpro@vsnl.com/info@techprohydraulics.com **www.techprohydraulics.com**

Price:

1. TECHPRO CNC Press Brake type THPB - 8031/25 **With Delem Make DA-41 CNC Controller and Ball** **screw/ Lm Guides based Servo Backgauge . With Wedge Type Adapters and One set of Tooling Suitable for Almirah Bending Inclusive** **a. Semi Goose Punch** **b. Two V opening Die** **c. Hemming Tool** **A and B make Gimec Italy C make Techpro Jalandhar** **Extra:** **1. Tooling as per your requirement** **2. Taxes : GST@18% .** **3. Transportation and Transit Insurance** **4. SERVO STABILIZER 3 KVa 3 phase** **5. Hydraulic Oil Grade 68 ,120 Litres**	1 Nos	INR 12,50,000/-

GENERAL TERMS OF SALE

DELIVERY TIME: 60 Working Days from the date of Commercially cleared P.O.

PRICES: Ex-Works Jalandhar

PAYMENT TERMS:50 % advance,, Balance Against Inspection at ourworks.

We hope you shall find the above as per your requirements, and favor us with your valuable Purchase order.

Thanking you and best regards,

For Techpro,

Raman Girdhar

(Managing Partner sales)

M: +91 9417186144

Works :- Gurbachan Nagar Industrial Area, Opp Verka Milk Plant, G.T. Road Bye Pass, Jalandhar (Punjab) Phone : 0091 – 181 –2600235

GE
W

GURMUKH ENGINEERING WORKS

Conveyorised Painting Plants & All Type of Conveyors

N.A. 80/2, Near Domoria Pull Phone : 0181-5073213 /2610513

Opp. Nadu Shah Kapoor & Sons, Mob : 098556-22213

JalandharCity Tin : 03171101249

E-mail:- gurmukh_13@rediffmail.com

QUOTATION

Ref . No: GEW/18/02883 Date: 25/07/2018

M/s. LEADER COOLER INDUSTRIES

DABWALI. (HR)

Kind Attn.:- **Mr. LALIT BANSAL.**

Dear sir,

We are in receipt of your enquiry for **CONVEYORISED POWDER COATING PLANT WITH DIESEL FIRED SYSTEM.** We are pleased to submit our most competitive offer for the same.

Our offer consist of :-

1. Data.

2. Technical Specification.
3. Price Summery.
4. Commercial Terms & Conditions.

We hope you will find our offer in line with your requirements and like forward to receipt your valued order at the earliest.

Thanking you and assuring our best services at all times.

Your faithfully,

For **GURMUKH ENGG. WORKS**

(HARJINDER SINGH)

PROP.

DATA

COOLERS

200 SET IN 1 SHIFT(10-12HINR)

TECHNICAL SPECIFICATION OF DIESEL FIRED HOT AIR GENERATOR

Convection Heating is most commonly employed for Water / Drying, Putty Paint/ Powder Backing . Hot air is blown over the article surface thereby heating it. This air is now cooled and is drawn by the circulation blowers over the heat source. The air thus reheated and is compressed into hot air ducts and let into the oven through air louveINR

This oven is fabricated out of insulated panels in a modular cassettes form. These Cassettes are supported and fabricated to ensure minimum heat loss due to conduction, convection and radiation.

We have offered :-

- A Diesel Fired Hot Air Generator.
- A Temperature indicating controller with sensor regulates the burner and there by oven temperature based on set parameteINR

Hot Air Generator :

1. Heat Exchanger : The diesel fired hot air generator mainly consist of:-

A) Combustion chamber being the 1st pass is a 3mm thick cylindrical shell fabricated our SS 310 material capable of handling temperature up to 400-500^0.

B) Transfer box guiding the fuel gassed from the combustion chamber to the tubes being the 2nd pass is fabricated SS 304, 2.5mm thick material.

C) The MS Pipe 3mm thick which finally guide the fuel gas to the outlet acts as the 3rd pass & 4th pass is the placement of pipes are designed to achieve the highest thermal efficiency. The heat exchanger is completely insulated by mineral wool filled walls. A temperature sensor is also provided to the heat exchanger which trips the burner when temperature exceeds the permissible limits.

2. Blower : The re-circulation is affected by blower which shall be1440 RPM dynamically balanced high pressure.

3. Ducting : Shall be made in CRC sheet of Gauge duly provided with Achones

for folding

4. Burner : **Ecoflame (ITALY) M- 20**

5. System Efficiency: 85%.

TECHNICAL SPECIFICATION OF DIESEL FIRED PAINT CURING OVEN

Overall dimension. (L x H x W) : 11100 x 4100 x 3600/ 2100mm.

Working dimension. (L x H x W) : 8600 x 1000 x 2600/1100mm.

Motor rating. : 7.5 HP 1440RPM.(Standard co)

Thermal rating. : 175000 kcal./hINR

Blower capacity. : 10000 m^3 /hINR

Heater box insulation. : 180mm rock wool.

Oven insulation. : 125mm rock wool.

Source of energy. : **HSD**

Burner.(Ecoflame Italy) : M – 20

Oil consumption. : 6 - 8 Ltr./hINR

Control panel. : Control panel fittings.(Standard co)

INTRODUCTION

Your offer is based on your specific requirement and the data furnished is summaries for below for your reference.

Working dimension. (L x H x W)	:	28'-6" x 3'-4" x 8'-6"/ 3'-6"
Max. temp.	:	250°C
Curing schedule. (Powder paint)	:	200°C for 10 -15 Minute.

MATERIAL OF CONSTRUCTION

1. Oven frame.	:	2mm thick fabricated sheet & angle.
2. Cassettes.	:	External-16CRC sheet. Internal-18CRC sheet.
3. Heat exchanger.	:	Drum-SS 310-3mm thick. Pipes-SS 304-2.5mm thick. and MS -3mm thick.
4. Circulation hot air ducts	:	18CRC Sheet.
5. Insulation thickness.	:	Chamber 125mm rock wool.
	:	Heater box 180mm rock wool.

TECHNICAL SPECIFICATION

OF

CONVEYORISED POWDER COATING BOOTH WITH MULTI CYCLONE SYSTEM

Overall area. (W x H x D)	:	2400 x 3000 x 2250mm.
Working size.(W x H x D)	:	1800 x 2100 x 1200mm.
Operator cutout.	:	800 x 1000mm.
Side cutout.(W x H)	:	600 x 1200mm.

Blower capacity.	:	45000m^3/hINR
Motor rating.	:	3HP 1440 RPM.(Standard Co.)
Multi cyclone.	:	4 Module.

POWDER RECOVERY UP TO 96%

Starter, tube light & power on /off switches.(Standard Co.)

TECHNICAL SPECIFICATION OF FOUR WHEELOVER HEAD CONVEYOR

1. CHAIN AND BEARING CONSTRUCTION PITCH 10"

- **CHAIN-** Cruciform MS squire 35 x 35mm soled material with auto black.
- **AXEL** - Axel OD 13mm x L- 102mm EN-8 Material.
- **BEARING-** OD 47mm x 13mm x ID 13mm forged hardened and tempered.
- **LINK –** 5mm thick x W- 30mm EN-8 Material.

2. CONVEYOR TREK CONSTRUCTION

- Four wheel four trek type conveyor 4 nos. of angel will be used 40 x 4mm thick And also conveyor trek bracket thickness is 3mm painted with antirust primer.

3. CONVEYOR SPEED

- 1M/Min.(with AC Drive)

4. DRIVE UNIT CONSTRUCTION :- Sprocket type.

5. WEIGHT CARRYING CAPACITY PER HOOK/ JIG :- 30Kg.

6. HOOK TO HOOK DISTANCE :- 500mm.

7. **DRIVE MOTOR** :- 1HP 1440RPM.(Make Siemens, Crompton, ABB)

8. **GEAR BOX** :- Make **SHANTHI, KAVITSU, ALLROYD.**

9.**TAKE UP UNIT** :- Screw type.

10.**OVERLOAD SAFTY** :- Mechanical clutch system in side drive unit provided for safety of conveyor.

11. Conveyor height. : 2100 –3800mm.

12. Conveyor length. : 70mtr.

13. Conveyor length in oven. : 17Mtr.

PRICE SUMMARY

Sr. No.	Descriptions	Qty.	Rate	Amount (INR)
1.	Paint curing oven	1No.	13, 85,000/-	13, 85,000.00
2.	Control panel with AC Drive & motors			1, 05,000.00
3.	Over head conveyor.	70Mtr.	3,950/-	2, 76,500.00
4.	Drive unit with 1hp motor. (Standard Co.)			1, 45,000.00
5.	Lubrication unit.	1No.	58,500/-	58,500.00
6.	Back to back p. c. booth with multi cyclone system.	2No.	1, 50,000/-	3, 00,000.00
7.	Powder coating gun. model **OPTIFLEX–R2** make **GEMA SWITZERLAND**	2No.	1, 55,250/-	3, 10,500.00

Total: - 25, 80,500.00

INR Twenty five lakh eighty thousand five hundred only

For **GURMUKH ENGG. WORKS**

PROP.

COMMERCIAL TERMS AND CONDITIONS

1. Prizes are Ex-works Jalandhar.

2. Transportation extra.

3. GST 18% on basic bill value.

4. **Erection &Commissioning charges 8% of order value.**

5. **Payment Terms:-**

* 50% of basic order value are advance along with technically & commercially clear purchase order.
* 50% against performa invoice.

6. Delivery will be within 6 to 8 weeks from date of receipt of commercially & technically clear purchase order along with 50% advance.

7. **Guarantee:-**

- A six months guarantee of all electrical system with burner will be given.
- One year guarantee against all mfg. defect.

For **GURMUKH ENGG. WORKS**

PROP.

EXCLUSIONS FROM OUR SCOPE

1. Any kind of civil work, breaking of walls etc. for exhaust ducting. If required necessary drawings will be provided.
2. Electrical supply with proper isolators from mains up to the control panels at one or more points wherever required.
3. Compressed air supply proper quality & quantity with regulators for various equipments.
4. Exhaust ducting from booth.
5. Article hanging jigs/hooks/hangeINR
6. Any type of consumables like powder/booth additives etc. which required for

trails & start up.

7. Loading/Unloading arrangement.
8. Welding set, Welding rod & Gas cutter.
9. All type of conveyor sports & oven stand (Squire pipe, Channel & Angle)

CNC TPP SPECIAL TOOL QUOTATION

S.No.	Description	Qty.	Unit Price in Rs.
1	Louver tool, D-stn., Set Assly.	1	1,50,000.00
2	Cluster tool, D-stn., Set Assly.	1	70,000.00
3	Embossing tool, D-stn., Set Assly.	1	55,000.00
4	Stamping tool, D-stn., Set Assly.	1	65,000.00
5	Counter sink – M6 screw, C-stn., Set Assly.	1	38,000.00
6	Counter sink – M3 screw, C-stn., Set Assly.	1	38,000.00
7	Banana tools, D-stn., Set Assly.	1	1,25,000.00
	TOTAL:		5,41,000.00

Delivery: Approx. 5-6 weeks from the date of your P.O. along with the advance money.

Payment: 50% advance with purchase order and balance + GST before dispatch of the material against proforma invoice.

Taxes: GST @ 18% will be extra.

For Ashok Mfg.Company Pvt.Ltd.

1

WAGNER
Industrial Solutions

Quotation No.: UCS/18-19/0080 Date:28/09/2018

M/S Leader Cooler Industries
Mandi Dabwali Dist – Sirsa
Haryana

Dear Sir,

Hereby, we are sending you the desired quotation. Please infer the technical details from the following documents.

We hope that the offer meets your expectations and is helpful for further planning.

Yours truly,

SATYENDRA SHUKLA
Sales Manager
Universal Coating Solutions
B- 98/38 Sushila Garden Mandoli
New Delhi -110093
Cell No: +918010225734
Email: ucsolutions88@gmail.com

Order to be made in the name
.
Universal Coating Solutions
B- 98/38 Sushila Garden Mandoli
New Delhi -110093

Page 1 of 4

1

WAGNER
Industrial Solutions

Quotation No.: UCS/18-19/0080 Date:28/09/2018

SR No.	PART NO	DESCRIPTION	QTY	UNIT BASIC PRICE RS	NET PRICE
1.	2331090	Powder coating system consisting of Prima sprint control module, PEM-X1 Ergo manual Corona electrostatic gun with all cable and grounding wire, PIF1 powder injector, hoses & brass connections set container and Stand.	1	1,45,000/-	4,35,000/-

TERMS AND CONDITION.

- G.S.T. 18 % as applicable.
- Payment should be 100% advance
- Delivery: 2 week
- Transportation etc. Extra
- This offer is valid for 30 days.
- One year warranty on equipment exlcuding consumables.
- Three year warranty on gun cascade till further notice.
- Installation cost will be extra. tro and fro ticket and lodging and boarding.

NOTE:
Pneumatic air supply of 6 bar pressure and voltage stabilized electrical connections with proper grounding at site of installation will be provided by customer.

Page 2 of 4

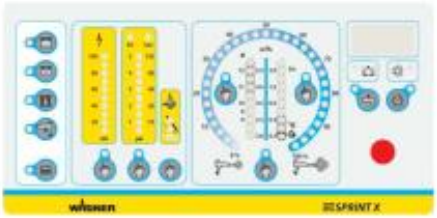
1

WAGNER
Industrial Solutions

Quotation No.: UCS/18-19/0080 Date:28/09/2018

PRIMA Sprint powder coating unit

Prima Sprint, WAGNER's new manual powder system, combines attractive design and superior functionality. Easy handling and exceptional coating results are achieved by the electronic controller EPG-Sprint. Its central dynamic control dial combines the operation of all parameters, which are divided into four functional sections. Unique cascade characteristic curve settings, for instance and Tribo compatibility offer the greatest flexibility for all types of powder.



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WAGNER
Industrial Solutions

Quotation No.: UCS/18-19/0080 Date:28/09/2018

Properties	**Advantages**
Gun weight of only 480g	Long, fatigue free work is possible
Only 1 control system for both Corona and Tribo guns	Fast and cost-efficient extension for Tribo application
Novel combined controller for feed and dosage air	Easy setting of the optimal combination of air assures higher coating quality
Control for total air	Powder discharge can be changed with one hand knob
Remote operation with graphic symbols	Operation is self-explanatory, less time is required for operator orientation
Mode for after coat	Reduces the re-coating costs
Mode for manually setting the high voltage , current limit and powder output	Optimal coating parameters can be selected for special coating applications
Homogenous powder cloud	Well distributed layer of powder with uniform thickness
Safe working with metallic, UDS and effect powder	Varied applications
6% Higher working efficiency (towards VDMA 24366)	Faster coating, lesser over spray and wastage
Replaceable safety wedge and electrode holder	Lesser costs for replacing wear parts

sudhir
Powering the Nation

Ref: _SGL/KNL/PD/3334
Date: 27.09.2018

M/s. LEADER COOLER INDUSTRIES,
MANDI DABWALI,
SIRSA.
9466127684

Sub: OFFER FOR 1x 82.5 KVA DG SET FITTED WITH ACOUSTIC ENCLOSURE.

82.5. KVA GENERATING SET

Supply of following **Silent DG sets** comprising of Cummins Engine coupled to 415 V Stamford make alternator both mounted on common Base frame with other standard accessories i.e. Fuel tank, Batteries with leads.
The set will be complete with MANUAL CONTROL PANEL and AVMS (Pads – inbuilt). The set will be enclosed in ACOUSTIC ENCLOSURE.

KVA	EN. MODEL	PHASE	QTY	UNIT PRICE	TOTAL
82.5	4BTAA3.9-G4	THREE	1	610000.00	6,10,000.00

TERMS & CONDITIONS

GST : Prices are Inclusive of GST AS APPLICABLE which is proposed @ 18% on Generating Sets. Any statutory variation in duty & taxes at the time of actual despatch shall be to customer's account. Octroi / Entry tax if applicable shall be to customer's account.

,
Delivery : Within 2 weeks after receipt of order.

FREIGHT : Inclusive

Payment : 30% payment along with the Purchase order and balance 70% against Performa Invoice but before dispatch.

Insurance : Inclusive, if required by you.

WARRANTY:
The offered Cummins Engine & Stamford Alternator is warranted for a period of 2 years from the date of dispatch OR 5000 Hrs. of operation date of commissioning And 5 years warranty on engine
crital parts such as Cylinder Block, Cam Shaft, Crank Shaft, Cylinder Head, Connecting Rod etc,

We hope that you will find our offer very attractive and shall favor us with your valued order at the earliest.

Installation

The installation done, If any, should be through Authorized and Approved Vendor failing which there will not be any liability against the company under any circumstances

You are requested to release the P.O. in favour of

M/S Sudhir Power Limited
(Formerly Known as Sudhir Gensets Ltd
MANESAR

Thanking you,
Yours faithfully

For ***SUDHIR POWER LIMITED,***

PARDEEP DHANDA
9996786772

One Page Quote COMPRESSOR

Leader Cooler Industries
Mandi Dabwali
Haryana

Quote No : QN/MY/76294/18-19
Quote Date :19/09/2018

Phone : 91-9466127684
Email : lalit.bansal27@gmail.com

Kind Attn. : Mr. Lalit Bansal

Subject : Compressed Air System (E11en-7) for Powder Coating

Reference : Discussion held with Mr. Mohnish Kandara

Dear Sir/ Maam,

We are enclosing herewith our QUOTATION for the product(s) requested. Hope you will find our offer as per your requirement and will favour us with your valuable order at the earliest.

PRODUCT DESCRIPTION :

Elgi Encapsulated Screw Air Compressor E 11en-7.0 :

Elgi Encap Series Screw Air Compressor model E 11en-7.0 giving a Free Air Delivery of 60.5 CFM at a working pressure of 7.0 Bar g. The Noise level of this air compressor is 65 DBA.

Vertical Air Receiver model VAR 500-7KG :

Vertical Air Receiver of 500L-7kg. capacity with pressure gauge, safety valve, inlet and outlet air connections suitable for above compressor.

Elgi Refrigerated Air Dryer EGRD 80 :

Elgi Refrigerated Air Dryer EGRD 80 as per their Technical Specification is attached.

Elgi Pre Filter Model PF-70 :

Elgi – Airmate Pre Filter Model PF 70 (For removal of particles down to One Micron including coalesced liquid Water & Oil).

Elgi Fine Filter model FF-70 :
ELGI- Airmate Micro Filter Model FF 70, (for removal of particles down to 0.01 Micron including Water & Oil aerosols).

Sr. No.	Product Name	Quantity	Unit	Rate (per unit)	Total Amount
1	Elgi Encapsulated Screw Air Compressor E 11en-7.0	1.00	1	262,300.00	262,300.00
2	Vertical Air Receiver model VAR 500-7KG	1.00	1	35,330.00	35,330.00
3	Elgi Refrigerated Air Dryer EGRD 80	1.00	1	117,730.00	117,730.00
4	Elgi Pre Filter Model PF-70	1.00	1	20,390.00	20,390.00
5	Elgi Fine Filter model FF-70	1.00	1	20,390.00	20,390.00
	Net Amount :				456,140.00

TERMS & CONDITIONS:

FOR : COIMBATORE
Packing & Forwarding @ 2% Extra on Compressor's Price.
GST: @18% extra

COMMISSIONING CHARGES: Rs. 5,000.00 Extra + Service Tax.
VALIDITY : 30 Days from the date of Offer and thereafter subject to our written confirmation.
DELIVERY : 3-4 weeks from the date of receipt of your Technically and Commercially clear Order along with advance.
PAYMENT : 40% payment advance with P.O and balance against Proforma Invoice before delivery.
TRANSIT INSURANCE :Will be Charged Extra @ 1%.
WARRANTY: 12 months from the date of commissioning, for defective material and bad workmanship. This warranty is valid only when the product is used in accordance with the manufacturer's instructions as stated in the Operation & Maintenance Manual.
Note:- Freight charges from our godown to the customer's site along with unloading of the equipment(s) at the site, Civil, Electrical & Pipeline works (if any) including arrangement for a Single / Three Phase Power connection at the usage point with the necessary electric cables, MCB / MCCB, proper EARTHING for the Air Compressor & Air Dryer and oils / lubes required for commissioning of the equipment(s) are to be borne / provided by the customers.

HSN CODE- AIR COMP-8414, AIR DRYER & FILTERS-8421, AIR RECEIVER-7311, COOLER CLEANING ACCESSORIES-3917

Our offices

Ahmedabad
2nd Floor, Shivalik Ishaan
Near CN Vidhyalaya,
Ambawadi,
Ahmedabad - 380 015
Tel: + 91 79 6608 3800
Fax: + 91 79 6608 3900

Bengaluru
"UB City", Canberra Block
12th & 13th floor
No.24, Vittal Mallya Road
Bengaluru - 560 001
Tel: + 91 80 4027 5000,
+ 91 80 6727 5000
Fax: + 91 80 2210 6000
Fax: + 91 80 2224 0695

Chandigarh
1st Floor, SCO: 166-167
Ernst & Young Pvt. Ltd.
Sector 9-C, Madhya Marg,
Chandigarh, Punjab 160009
Tel: +91 172 6717800
Fax: +91 172 6717888

Chennai
TPL House, 2nd floor
No 3, Cenotaph Road
Teynampet
Chennai - 600 018
Tel: + 91 44 4219 4400
+ 91 44 6632 8400
Fax: + 91 44 2431 1450

Hyderabad
205, 2nd floor
Ashoka Bhoopal Chambers
Sardar Patel Road
Secunderabad - 500 003
Tel: + 91 40 6627 4000
Fax: + 91 40 2789 8851

Oval Office, 18, iLabs Centre,
Hitech City, Madhapur,
Hyderabad – 500081
Tel: +91 40 6736 2000
Fax: +91 40 6736 2200

Kochi
9th Floor, Abad Nucleus
NH-49, Maradu PO
Kochi, Kerala 682304, India
Tel: + 91 484-3044000
Fax: + 91 484 2705393

Kolkata
22, Camac Street
Block 'C', 3rd floor
Kolkata - 700 016
Tel: + 91 33 6615 3400
Fax: + 91 33 2281 7750

Mumbai
6th floor & 18th floor
Express Towers
Nariman Point
Mumbai - 400 021
Tel: + 91 22 6657 9200 (6th floor)
+ 91 22 6665 5000 (18th floor)
Fax: + 91 22 22876401 (6th floor)
+ 91 22 2282 6000 (18th floor)

Block B-2, 5th Floor,
Nirlon Knowledge Park,
Off Western Express Highway,
Goregaon (E), Mumbai – 400 063
Tel: +91 22 6749 8000
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
Tel: + 91 124 464 4000
Fax: + 91 124 464 4050

6th floor, HT House
18-20 Kasturba Gandhi Marg
New Delhi - 110 001
Tel: + 91 11 4363 3000
Fax: + 91 11 4363 3200

4th and 5th Floor, Plot No. 2B, Tower 2,
Sector 126, NOIDA – 201 304
Gautam Budh Nagar, UP, India
Tel: +91 120 671 7000
Fax: _91 120 671 7171

Pune
C-401, 4th floor
Panchshil Tech Park
Yerwada (Near Don Bosco School)
Pune - 411 006
Tel: + 91 20 6603 6000
Fax: + 91 20 6601 5900

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