**Overview of IIF & Indian Foundry Industry**

**By**

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**About IIF (The Institute of Indian Foundrymen)**

The Institute of Indian Foundrymen (IIF) is apex National industry body for Indian Foundry Industry (Metal Castings Industry) **founded in 1950** with HQ at Kolkata. IIF has completed 66 glorious years in the service of Indian Foundry Industry

IIF is accredited BMO (**Business Member Organization) accredited under Gold Category by NABET/QCI** under the initiative of Ministry of MSME & GIZ Germany

**IIF is active member of World Foundry Organization, CII, EEPC, BRICS Foundry Forum, Asia Foundry Forum & represents Indian Foundry industry in various international events & forums**

IIF is actively engaged indissemination of knowledge & promotion of latest productive & greener technology, skill development, business & export promotion & policy advocacy for the foundry sector. IIF also maintains & updates periodically large database, publishes Indian Foundry Directory, technical publications on various topics of interest to foundry industry, promotes efficient energy & resource management, lean manufacturing techniques & for sustainable growth of Foundry Sector in India.

IIF serves as a nodal point of reference for all stakeholders for foundry industry

IIF conducts its activities through 27 chapters & 4 regional offices in the country at Kolkata, Delhi, Mumbai & Chennai & 3 centres of excellence ie Foundry Informatics centre (FIC)at New Delhi , Centre of Education & Training ( CET ) at Kolkata & National Centre of Technical Services ( NCTS ) at Pune

There are approx 4000 members from leading foundries, equipment manufacturers, material manufacturers, academicians from leading institutions, foundry consultants, service providers & students

***Main Objectives/Activities of IIF:-***

● Training, Education & Certification

● Seminars / Conferences /Exhibitions For Dissemination of knowledge

● Publication of Technical Material /CDs/DVD

● Dissemination of Information on Latest Trends/ Technologies / Global Best Practices / Participation in International Events

● Business Development

● Promotion of Various Govt Schemes for Benefit of Foundry Sector

● Maintenance & Updating of Analytical Database

● Awards For Promotion of Excellence in Various Operational Areas of Foundries

● Policy Advocacy For sustainable growth

***Infrastructure of IIF:-***

* Large Modern Library at Kolkata
* Offices at Kolkata, Delhi , Pune , Chennai, Coimbatore owned & Maintained by IIF
* Secretariat with Supporting Infrastructure
* Centres of Excellences

***Centre of Excellence –Activities:-***

**Foundry Informatics Centre, New Delhi**

* Updation & Maintenance of Large Database on Foundry Sector
* Publication of Indian Foundry Directory
* Reply Queries of Members, Buyers, Foreign Trade Missions , Government Deptts , Associations & other Stakeholders
* Represent IIF in various Meetings & Co ordination with various Govt agencies & stake holders
* Submit proposals of interest to Foundry Sector for approval
* Dissemination of Information on Various Govt Schemes
* Policy Advocacy with the Govt

**Centre of Education & Training, Kolkata**

* Design Curriculum for Training
* Conduct Short Term Training Programmes
* Conduct Modular Examinations & Certification leading to Grad IIF ( Equiv to Graduation )
* The Exams are conducted at various centres viz. Delhi, Kolkata , Pune , Chennai, Kolhapur, Calicut, Coimbatore , Bangaluru
* Approx 160 students appeared last year. This year 200 students are likely to appear for Exams

**National Centre of Technical services, Pune**

● Technical Publications On Foundry Technology

● Technology Solutions

● Simulation Soft wares

●Consultancy

**Major Initiatives by IIF**

IIF has been playing pivotal role & is acting as key enabler for sustainable growth of the sector by various initiatives & interventions such as below

●Publication of Technical papers/CDs on foundry related topics & monthly Indian Foundry Journal & Indian Foundry Directory

●Organizing annual Indian Foundry Congress & International Foundry Exhibition & participation in International Conferences/Trade fairs to promote business & joint co operations /ventures

● Promotion of Cluster Development programmes & creation of common facilities for modern design & manufacturing tools

● Promoting Collaborative Approach for harnessing synergies for better results

● Promotion of conservation of natural resources, waste reduction & sand recycling in clusters

● Promotion of Efficient energy & resource management in foundries by undertaking energy audits & suitable interventions

● Promotion of lean manufacturing programmes for foundries for improved utilization of resources, waste reduction & enhanced productivity

●Signing of MoU with Japan Foundry Society for exchange of information & knowledge sharing for benefit of members

● Foundry simulation software services at nominal cost for usage of IT applications for improved design & yield of castings for improved productivity

● Publication on Best Practices in foundry operations jointly with PCRA, Ministry of Petroleum & Natural Gas with focus on efficient energy management

● Submission of research project on greening of products & processes to Ministry of Environment & Forests

● Perusal of various issues through DC MSME & Ministry of MSME pertaining to skilling, creation of training modules, IT application, up gradation of Technology Centres & ITI, revision of CLCSS scheme & definition of MSMEs etc & with Ministry of Environment & Forests regarding categorization of foundry industry etc

● Active engagement with Policy makers to initiate policies to promote sustainable development of foundry sector –Formation of Foundry Development Council under Chairmanship of Secretary to Govt of India, DIPP

**Indian Foundry Industry**

There are approx 5000 foundries in India largely in MSME sector in various foundry clusters

***Major Foundry Clusters:-***

Each cluster is known for its products. The major foundry clusters are located in Batala, Jalandhar, Ludhiana, Agra, Pune, Kolhapur, Sholapur, Rajkot, Mumbai, Ahemdabad, Belgaum, Coimbatore, Chennai, Hyderabad, Howrah, Kolkata, Indore, Chennai, Ahemdabad, Faridabad, Gurgaon etc

***Metal Casting Process:-***

Metal casting is the science of giving intricate shapes to molten metal by solidification of molten metal in the moulds to produce desired cast metal components of desired shapes & metallurgy having physical & chemical properties to match the wide range of applications which otherwise cannot be produced by any other manufacturing process.

***Application of Metal Cast Components Produced in Foundries:-***

The application of cast metal components encompasses practically most products that we use ranging from ***auto, auto components, components for railways, aero & aerospace industry, domestic appliances, textile, cement, agricultural machinery, tractors, earthmoving machinery, electrical machinery & power generating equipment, sanitary fittings, pipes, pump, compressors, valve industry etc.***

The history of the metal casting in India is very old approx 3000 BC. The metal statues & ornaments were mainly cast in those days

***Although the basic principle remains the same, yet since then there have been tremendous changes & advancements in metallurgy, processes, materials, mechanisation, application* *of IT, measurements & controls for efficient production of repeated products of consistent quality for mass production to meet the demand of downstream industry***

Application of light weight & specially alloyed metal castings is the order of the day for reduced energy consumption. Similarly the advancements in downstream industry is creating new requirements of metal castings which can withstand critical applications in nuclear & Ultra Critical Mega Power Plants which operate at much higher pressures & temperatures

**Role in Manufacturing Sector**

The new manufacturing policy envisages the increase in the share of manufacturing in the GDP to 25% from current 15% & to create 100 Million additional jobs in next 10 years. Since all engineering & other sectors use metal castings in their manufacturing, the role of foundry industry to support manufacturing is very vital. It is not possible to achieve the above goal without the sustainable corresponding growth of the foundry sector

**Production**

***The Foundry industry currently produces 11 Mn Tons approx of cast components in ferrous & non ferrous category as per various international standards The foundry sector’s annual turnover is approx USD 19 Billion at current production rates. It is however only 10 % of global production by weight.***

***As per world casting census conducted by Modern Castings,USA , India is 2nd largest casting producer in the world .***

***Exports: India exports castings worth approx USD 2.7 Billions***