



President's Message



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Dear Fellow Foundrymen and Friends,

All businesses need to be competitive in order to survive and foundries are no exception. The primary competitiveness arises out of internal efficiencies like lower cost structure or better product quality which can be achieved by following certain good foundry practices about which, I am going to express my views before you in this issue. A starting point could be knowledge about various foundry processes and its methodology or application and concern about safety of your fellow workmen.

Due to changing outlook and legislative measures, today there is very high focus on industrial safety which is now considered as good for business and has become mission statement for various companies. Companies are providing high priority on better health for their workmen and trying to capture near misses in order to avoid major accidents. It is nice to see that more and more foundries in India are becoming OSHA compliant

which is also a prerequisite for export to many foreign locations.

The owner or whosoever is running the foundry should minimise or eliminate health and safety risks as far as reasonably practicable to ensure workers and other shop-floor persons are not exposed to safety and health hazards arising from the factory work. This includes risks associated with using, handling and storing hazardous chemicals, airborne dust and contaminants as well as hazards associated with foundry work like heat and noise. Manufacturers and designers need to carry out testing, analysis after erection and verify parameters during trial production to enhance safety precautions.

Good house-keeping like fixing specific locations for storage of tools and making sure that no unused tools, equipment, slabs, waste material is lying on the shop-floor or walkways is an important precautionary measure. The pouring area should

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be made free of items which are not involved in the pouring process.

Workers on shop-floor should be equipped with protective equipment made of fire-resistant natural material like cotton, heavy wool or leather along with proper shoes and gloves.

Proper training and instruction must be given to the workers handling hazardous material and equipment, so that they do not cause any risk to themselves or co-workers or damage foundry equipment.

Timely inspection of foundry machinery is an important step in ensuring worker safety. Proper examination of the state of equipments like crucible, furnace walls, fuel lines burners and pouring tools is most critical to prevent failures or preempt accidents. Any defect or failure in these items during a melt or pour can be extremely dangerous. It is also to melt and pour metals at correct temperatures especially in case of hazardous alloy elements like lead, zinc, mercury or beryllium.

Always using qualified and licensed personnel to handle high voltage lines, replacing damaged switches or wires periodically, using genuine spares and isolating machinery from electrical mains before doing any maintenance work, should be effective. Also smoking or use of lighters should be banned in pouring areas. Workers should be acclimatized before being exposed to heated areas. In order to prevent burns caused by metal splashing / touching hot surfaces by mistake which is a major source of injury in foundries, some degree of automation and proper signage is to be used.

Where a lot of noise is involved apart from controlling noise through use of dampers or mufflers, ear plugs should be made available to workers in noisy areas. Also low vibrating tools and equipment need to be preferred.

Workers in foundry need to be Alert – being tired, sick, drugged or under influence of alcohol is completely undesirable. Remember the motto. Always Alert Accident Avert.

Carry all molten metal with caution to prevent spilling and be alert for leakages

Where the foundry is using scrap, all scrap need to be screened for radioactive material before entering the foundry.

Keep dry sand and other fighting materials like fire extinguishers ready to tackle electrical fires, fire from combustible materials or liquid and gas related explosions.

Proper waste disposal system should be put in place and hazardous waste should be clearly identified and sealed in suitable containers that cannot be damaged. Also all local relevant environment protection authority regulations and all pollution control norms are to be adhered to.

Foundry should have a suitable evacuation plan and foundry staff must be trained on how to react in other emergency situations.

Accidents may happen, despite the best planning, precautions, and care. Therefore basic first aid need to be available for administering before help arrives. The workplace must have a working phone to call for emergency services.

Overall, the Foundry layout should be such that shop floor has segregated administration & storage; areas for moulding, melting & pouring, pattern shops etc; clear passage for free movement of workers in work area or during emergency. Drainage should be outside the shop-floor and cleaned on regular intervals.

Let us all try to follow the above guidelines by which we would not only reduce the risk of accidents but also improve upon cost and productivity.

The motto dear friends is as simple as ABC.

Always

Be

Careful

Shashi Kumar Jain

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The Institute of Indian Foundrymen