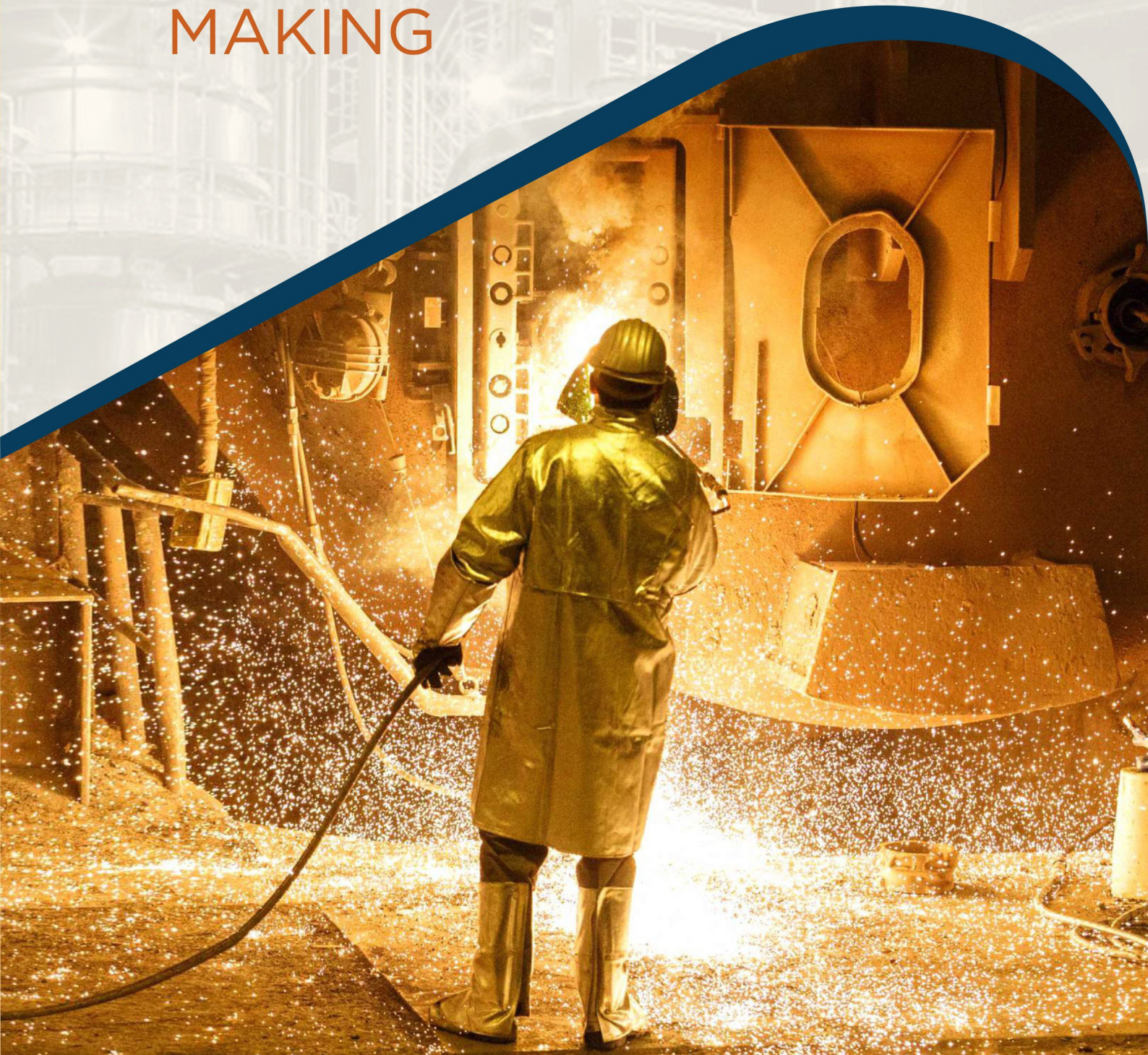




# SLAG MAKING IS STEEL MAKING





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We are a Team of Steel Plant Professionals, providing Technology and Processing Improvement Solutions to Maximize Profits. We have a qualified technical team. Our R & D team conducted extensive research, several product quality tests in various labs using sophisticated instruments, and after a detailed comparative analysis, we have developed a unique revolutionary new product ready to use in the name of QSAR MetalFlux.

We are committed to deliver the finest reliable quality products to our clients because our prime goal is none other than customer satisfaction. Our offered products are processed using the best grade basic materials. The products offered by us are widely acknowledged by our customers owing to their unique characteristics.





QSAR MetalFlux is developed with unique method, User friendly and easy to use, It is popular across the emerging market. Objective to develop the QSAR MetalFlux to save wastage in steel melting processes through Induction Furnace route and control (O) ppm.

We all are well aware in induction furnace route, liquid metal consist of low level OXYGEN presence in PPM level and its create serious problems. Due to presence of (O) ppm in liquid metal entire process gets effects like NOZZEL CHOCKING, Parallely high FeMn affects hot rolling at high Si % levels.

Our newly innovative QSAR MetalFlux is ought to bring into haste counter intuitive measures against the apparent challenges faced in the Steel Industry are ideal for fast growing steel companies aiming for higher productivity without compromising on the world – class 'QUALITY' to overcome these very problems.

### SOP (System of Process/Procedure)

During the melting of steel scrap, most of the scrap is suspended with air inside the furnace. The induction field raises the temperature of the scrap, all the way to the melting point of steel (1540°C). This results in severe adverse effects, including requirement of more energy, and exponentially increasing surface oxidation beyond 700°C.

Steel slag is a by product of the steel making and steel refining processes. Slag resulting from the steel making process floats on top of the molten steel. Oxides of iron increase the amount of slag formed. The oxidation produces highly reactive FeO slag. Furthermore, the slag is highly fluid at temperatures exceeding 1540°C, making it very difficult to manually rake off the entirety of it.

The final stage of slag, as we know it, comprises of compounds of oxides like (FeO 10 - 15 %, SiO<sub>2</sub> 75 - 80% (Silica lined furnace) with Aluminium Oxides, MnO<sub>3</sub> and other alkali earth metals & nonmetallic elements and also contain small volume of metals, sulfides of metal and gases.

Addition of QSAR MetalFlux in Induction furnaces its reacts with FeO and other Oxides compounds and removes gases quickly, and transferring magnetic particles of slag into the liquid metal. In order to get a good quality product, removing the inclusion becomes necessary. Makes the slag creamy which helps in easy scooping of slag from metal. Abundant residuals reacts with Dissolved/ Preliminary Oxygen at a higher temperature to flange crack the inclusions present in liquid metal resulting floats on top.

#### Addition process of QSAR MetalFlux during melting.

- 1) Please note 2.5 kg/ton QSAR MetalFlux is required, So please take quantity as per FURNACE capacity.
- 2) When your Molten Metal is ready for addition of Silico Mn before that add QSAR MetalFlux @ 1600 degree minimum temperature and mix properly as per FURNANCE capacity. After QSAR MetalFlux addition you add your Silico Mn as per your FURNACE capacity.
- 3) Please remove complete ALUMINIUM bars/shots. (If it's use for oxygen removing).
- 4) Please deduct Silico Mn 1kg/ton to 1.5 Kg/ton.
- 5) Please remove Ferro Silicon 200gm/ton.
- 6) Higher applications are recommended with higher FeO % in slag.



### UP COMING PRODUCTS

- ▶ QSAR Redex.
- ▶ QSAR Metal Purifier - The product increases resistance to rusting and provides a glossy finish.
- ▶ QSAR Quarzite Powder.



## BENEFITS

- ▶ Billet Metallurgical problem longitudinal cracks form at or near the corners of the billet are one of the most common mould-related quality problem encountered in billet casting will improve.
- ▶ Oxide inclusion types are regarded as deleterious to the properties of the solid steel and bad inclusion can be removed using of QSAR MetalFlux.
- ▶ The formation of gas blow holes in continuously-cast billets is a frequent phenomenon. Minimize the occurrence of blow holes, Quality problems such as Cracks, Porosity, Piping, Pin holes etc.
- ▶ Improved in TMT Inner core and structural bonding.
- ▶ Using of QSAR MetalFlux saving of 1 kg to 1.5 kg Si-Mn per tons of liquid metal.
- ▶ Usage of QSAR MetalFlux agglomerates Slag, thereby making it foamy, lighter and easy to remove.
- ▶ Recovery in Fe- metallic due to reduced FeO in slag.
- ▶ Mn % reduced in ladle found using of QSAR MetalFlux.
- ▶ When QSAR MetalFlux is added to molten metal during charging process, it is neutralized, and the percentages of Sulphur and Phosphorus drops slightly.
- ▶ Due to removal of Oxygen (O<sub>2</sub>) from liquid metal, Improvement on Tundish life.



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