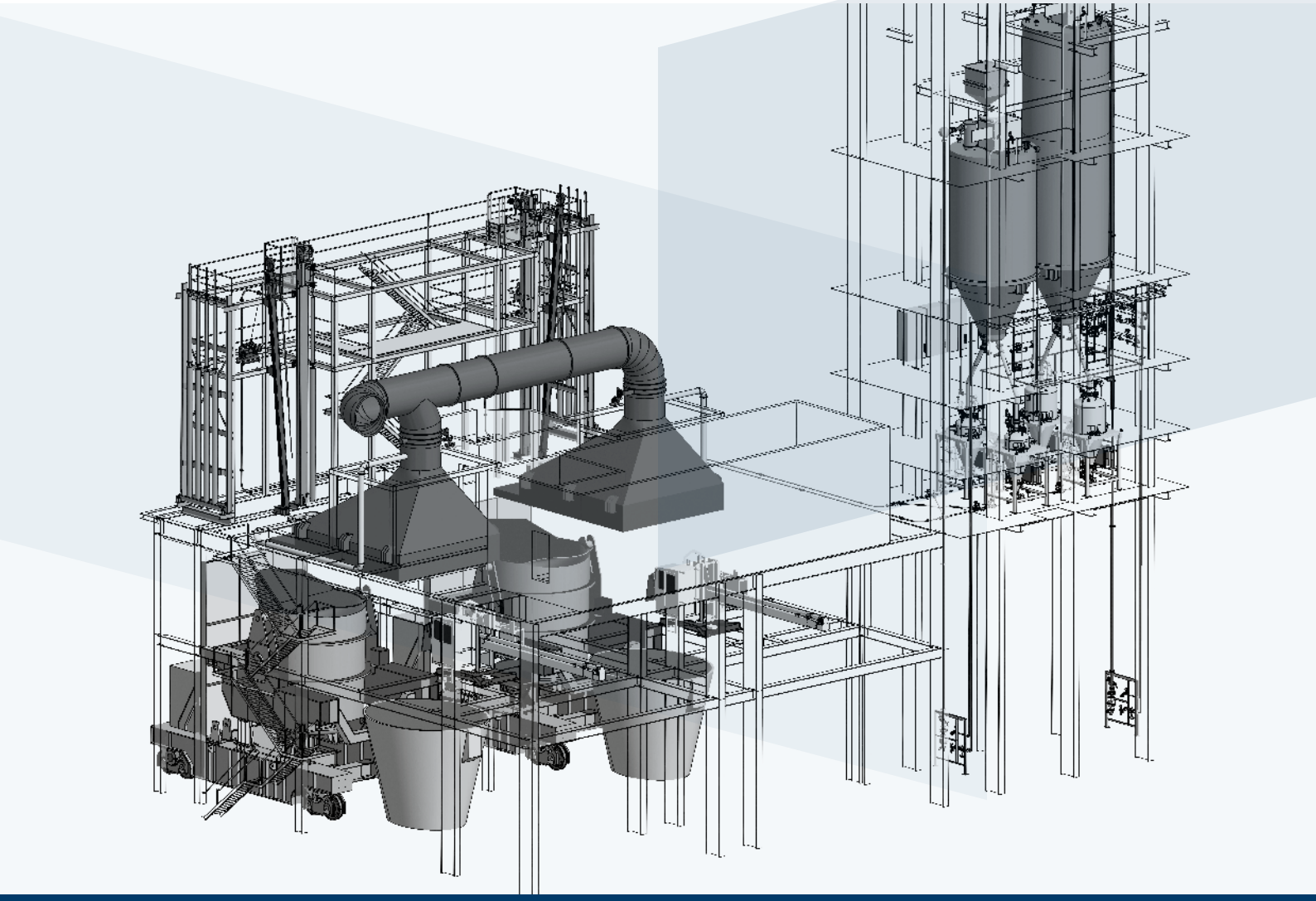
ALMAMET
INDUSTRIAL SOLUTIONS

CUSTOMER-ORIENTED, INNOVATIVE, FLEXIBLE

END-TO-END SERVICE SOLUTIONS

Developed and provided by ALMAMET



A GLOBAL APPROACH WITH LOCAL SOLUTIONS

END-TO-END SERVICE SOLUTIONS

The production of **high-quality steel grades requires a low sulphur concentration in the final product.**

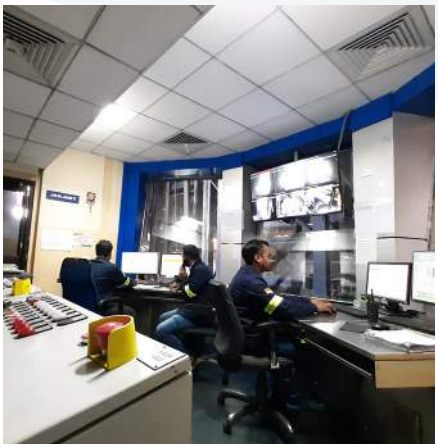
ALMAMET Industrial Solutions (AIS) as your Service Solution provider offers a wide range of individual Service Solutions to process the **desulfurization as effectively and efficiently** as possible and to achieve the aimed, low sulphur content.

AIS provides an end-to-end and long term support, from the very first ideas followed by engineering up to the supply of plants and systems, via operations, optimizations and modernizations up to the supply and exchange of spare and wear parts.

A global Team of technical experts, develops individual Service Solutions in the field of iron & steel desulfurization at its best. The knowhow and experience herewith stands for more than 150 worldwide De-S installations with a ladle capacity of 50 MT to 400 MT.

Amongst others, ALMAMET Industrial Solutions provides the following Service Solutions:

ALMAMET Service Technicians at regular checks



Control of Twin-HMDS at JSPL Angul, India

| Safety:
With our safety checks ALMAMET Industrial Solutions improves the safety of your desulfurization systems and installed units, ALMAMET also conduct trainings to enable your employees in the safe handling of the equipment as well as with the reagents to avoid or minimize occurrence of critical situations.

| Engineering:
Our Engineering includes technical design, the creation of associated specifications as well as technical calculations. The core system in the ALMAMET Industrial Solutions desulfurization technology is the injection system controlled by the proprietary MEPOL system.

| Plant construction and commissioning:
ALMAMET also conducts plant construction as well as commissioning of the Hot Metal Desulfurization Stations (HMDS).

| Stable operation:
ALMAMET can support you in increasing the availability of your plant and reducing unplanned stops - because of an instable desulfurization process - to a minimum by a detailed root-cause analysis and detailed improvement measures on your HMDS, e.g. a regular maintenance or an improvement of injection parameters.

| Performance Increase:
Based on the recording of the current operating status, e.g. the throughput, current injection times, the sulphur requirements, dust emissions, the MEPOL settings as well as the automatization level, ALMAMET Industrial Solutions can help to increase the performance of the Hot Metal Desulfurization Station.

250 MT-Ladles at JSPL Angul, India

Outlet control valves as spare parts

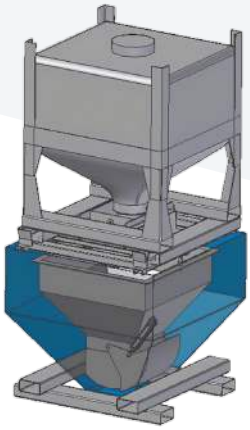
Installed outlet control valves

Plant modernization and optimization:
As your specialized partner AIS is committed to support you in the modernization and optimization, e.g. by changing the technology from Mono- to Co-Injection, in the lime screening from BOF lime and fluidization, in replacing old not performing injection dispensers or in changing reagents.

Cost optimizations:
Based on the provided data as well as on the framework parameters such as the initial sulphur content, the target sulphur, existing temperatures, the time to match the BOF cycle and the used reagents, ALMAMET Industrial Solutions will help to reduce the costs by process optimization and the metallurgical software model MPC.

Operations:
ALMAMET Industrial Solutions offers Operations-as-a-Service to ensure a smooth operation of the Hot Metal Desulfurization Stations (HMDS).

Spare and wear parts supply:
AIS is your reliable partner in supplying OEM-spare and wear parts for a trouble-free operation of systems. With a timely examination and exchange the downtimes can be reduced to the minimum.



Dosing System for Calcium Carbide with container

Improving the steel quality: Calcium Carbide dosing stations

ALMAMET offers dosing systems to add lumpy Calcium Carbide during the tapping at the BOF or EAF in a safe manner. These specially for that purpose designed dosing stations ensure the reduction of oxygen potential in the steel due to the reaction of Calcium Carbide with oxygen. By this approach the amount of Aluminum to be added in the secondary metallurgy producing alumina can be significantly reduced which improves the steel quality due to a lower amount of impurities and inclusions. The design of the dosing system allows for adding specified amounts as well as specified dosing rates. By this technical solution the safety as first priority is ensured and the quality of the steel is increased while cost can be reduced.

Local production of Fluidized Lime

The BOF requires a certain amount of lime to be added during the process. A significant part of the high-quality lime gets lost for the process since the finer parts, which are generated as wear during the transport can be captured by the dedusting system.

ALMAMET offers systems for screening the BOF lime prior to the BOF in order to take out the fine share of lime. The lime will be ground and treated for his flow properties in order to produce a fluidized lime for hot metal desulfurization and/or secondary metallurgy. The local production of lime reduces cost as well as Carbon Footprint and ensures the availability of high-quality lime on site without long transport.

All provided Service Solutions are not limited to specific desulfurization technologies, rather these are provided for different technologies:

- Injection Technology for Liquid Steel Desulfurization in Open Ladles
- Injection Technology for Steel Desulfurization in RH Vacuum Degassers (“Top blowing”)
- Injection Technology for Hot Metal Desulfurization

Moreover, ALMAMET offers its service worldwide for any kind of installed injection system.

ALMAMET GmbH
Gewerbestrasse 5a, 83404 Ainring, Germany
T +49 8654 77318-0, F +49 8654 5605
www.almamet.com