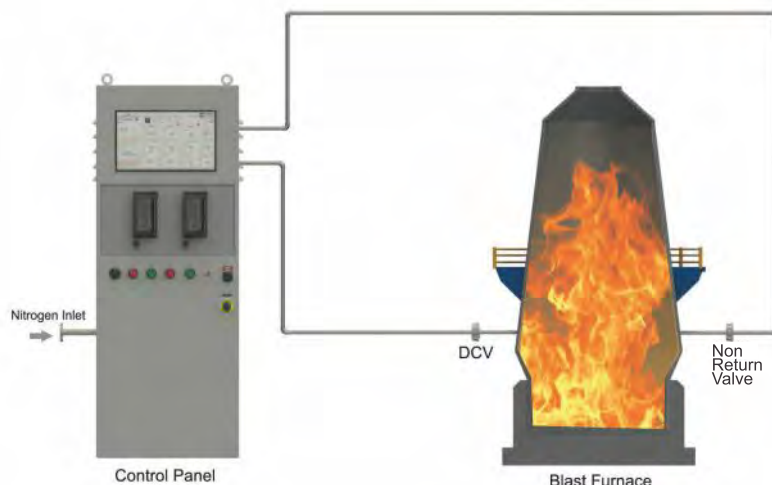


Blast Furnace Pressure Measurement

Ready to Install Skid for Multiple Location Pressure Measurement



Process



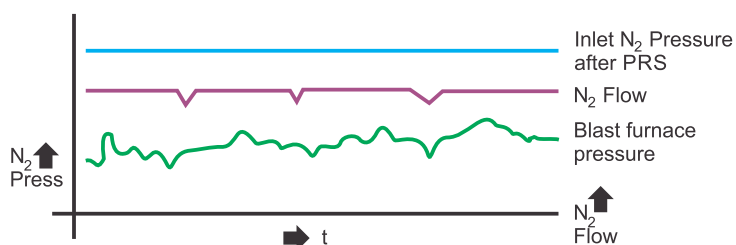
With advancements in technology, the blast furnace is no longer just a black box. Instrumentation has given an edge to measure and reveal what is happening inside the blast furnace.

The blast furnace wall pressure is a vital indicator of the profile of different zones in the furnace, and therefore an important parameter to be measured. However, since blast furnaces have a hot, dusty, corrosive and erosive environment, the measurement system calls for indirect measurement through back pressure measurement technique. In this technique, nitrogen is purged into the blast furnace at a fixed flow rate and the back pressure is measured by a pressure sensor. The profile is analysed by transmitting the signal to the next level.

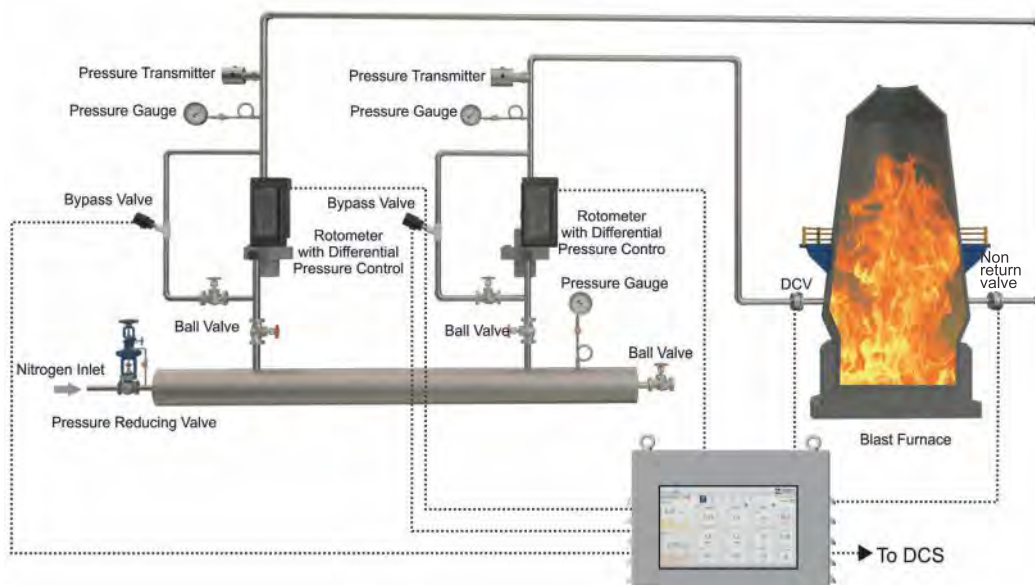
Problems Faced

Frequent chocking in conventional system of measurement

Chocking can not be avoided even in case of normal purging of nitrogen



The Forbes Marshall Solution



Features and Benefits

Differential pressure control

No chocking in the pipe hence no disruption in measurement

Keeps the flow constant irrespective of outlet condition which offers maximum availability of measurement

Optimised flow control for low nitrogen consumption and avoiding false measurement of nitrogen pressure

Transmission of signal or alarm contacts to next level

Pre-fabricated, factory tested, certified, easy to install system

90% of components connected to the blast furnace at high temperature points, are manufactured in-house

Built in safety interlocks for smooth commissioning process

Other Systems

Oxygen enrichment

Blast humidification

Tuyere leak detection

Tar/oil injection system

Robopositioner based N₂ pressure reducing skids

N₂ blanketing skids in coal Injection

Dust and gas monitoring in coal mills

References

Tata Steel Ltd., Jamshedpur

JSW Steel, Bellary

Tata Steel Ltd., Kalinganagar



Forbes Marshall
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Forbes Marshall Arca
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