



**CASE STUDIES OF PIHBOND INDUCTION IN
HORIZONTALLY PARTED HIGH PRESURE LINE**

By Goyal Technical Team

AGENDA

- ❖ The Goyal Group, trying to ensure better castings for the foundries, have now after considerable R&D effort, developed Single Additive product – ***PihBond series*** for foundry's green sand system and now associated with a Foundries with Horizontally Parted High Pressure lines.
- Goyal Group introduced Single Additive– ***PIHBOND series*** in the sand system with the following objectives:
 - ✓ *Improve the peel off and finish of castings.*
 - ✓ *Optimizing Shot blasting time .*
 - ✓ *Optimize the addition of various consumables.*
 - ✓ *Control Weight of Castings.*
 - ✓ *Reduction in Sand related Rejections.*

SAND STICKING



PRE - TRIAL



POST - TRIAL

SAND STICKING



PRE - TRIAL



POST - TRIAL

SHOT BLASTING



PRE - TRIAL



POST - TRIAL

SHOT BLASTING



PRE - TRIAL



POST - TRIAL

TECHNICAL IMPROVEMENT- FOR 1000MT PRODUCTION FOUNDRY

• Reduction in Addition of Additives	55%
• Increase in GCS	5%
• Reduction in Sand Sticking	45%
• Reduction in Shot Blasting Time	20%
• Avg. Reduction in Casting Weight	3.26%
• Reduction in Sand Related Rejection	36.27%
• Dust addition	30%

*The entire dust collected was added back into the mix, in spite of which fines in sand reduced by nearly 10% of the Pre **Pihbond***

CONCLUSION

- The Foundry accrued Technical Advantages as stated in our proposal.
- WIP in the fettling was reduced considerably
- This enabled faster dispatch of castings
- Mold breakage reduction, enabled better production
- Shop floor pollution reduced considerably enabling better working conditions in the Foundry
- ***While the cost of PihBond enriched sand works out higher than Bentonite + LCA enriched sand, when considering the overall costing (cost advantage accrued by the tangible Technical Advantages) the Foundry was advantaged commercially in comparison to the Bentonite + LCA System.***