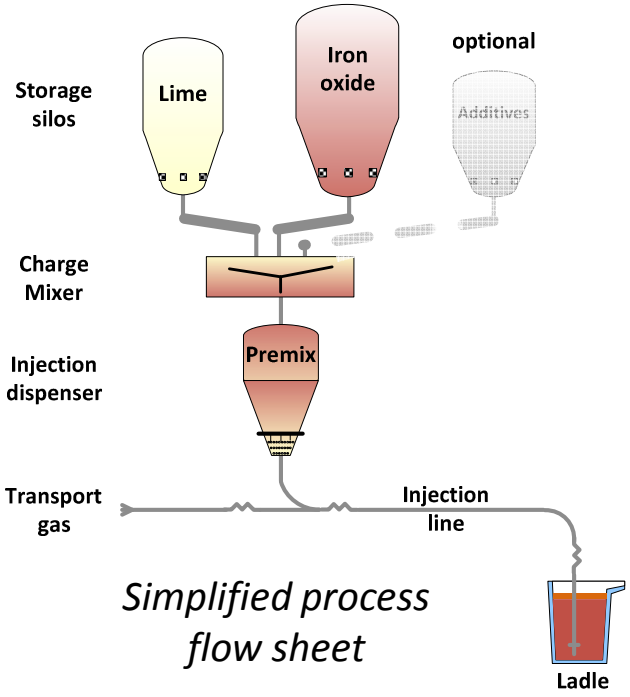
METINJECT KÜTTNER

Küttner's Direct Injection Process (DIP) for Dephosphorization of HM

De-P of desiliconized HM is carried out by deep dense phase injection of an inhouse-made premix of lime and iron oxide.

- High flexibility
- Injection of a tailor-made premix
- Independence from reagent suppliers
- No lance clogging
- Minimum splashing
- Dense phase injection
- Easy to operate and maintain
- Minimum CAPEX and OPEX



Simplified process flow sheet

Exemplary data of Küttner's Direct Injection Process for HM De-Phos:

▪ Injected Premix	10 ~ 40	kg/tHM	(up to 70 % Iron oxide)
▪ Injection rate	30 ~ 100	kg/min	(load > 50 kgsolid/kggas)
▪ De-P degree	40 ~ 75	%	
▪ Temperature loss	2 ~ 3	°C/min	
▪ Ladle freeboard	50 ~ 100	cm	

Latest references:

- TiZir, Norway (HM De-S, De-P)
- Sphinx, Saudi-Arabia (HM De-S, Re-C, Re-Si, CH)
- Tronox, South Africa (HM De-S, Re-C, Re-Si)
- TISCO, China / Isdemir, Turkey / etc. (HM De-S)

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