

Hydrometallurgical treatment of steel making dust by alkaline leaching.

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Objectives of the project

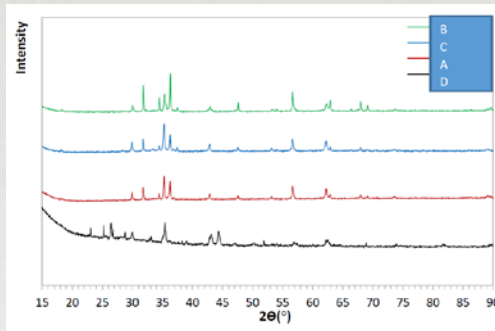
1. Characterization of 4 EAF dusts produced by Swedish companies

2. Recovery of Zn using alkaline leaching

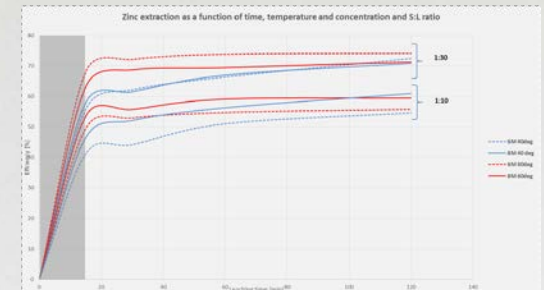
Results

Element [wt%]	A	B	C	D
Ca	0.35	0.60	0.84	5.56
Fe	26.27	0.60	26.83	25.11
Mn	1.60	1.33	4.97	2.79
Zn	36.41	36.08	23.58	0.71

X-ray diffraction, ICP-OES, EDS, emission scanning electron microscopy, BET analysis, etc.



- NaOH concentration: 6, 8, 12M
- temperature: 20, 40, 60 and 80°C
- solid to liquid ratio: 1/50, 1/30, 1/10



Participants : Chalmers, Högonäs AB, Scania AB, Erasteel AB, Uddeholms AB

6M NaOH, 40°C, solid to liquid ratio 1/30 was selected as optimal to sustain Zn recovery sufficiently high.

