



सीएसआइआर - खनिज एवं पदार्थ प्रौद्योगिकी संस्थान
CSIR-INSTITUTE OF MINERALS & MATERIALS TECHNOLOGY

वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद
Council of Scientific & Industrial Research

भुवनेश्वर-751013, ओड़िशा, भारत, Bhubaneswar-751013, Odisha, INDIA

CSIR- IMMT/MPD/SKB/MOS//2017

Date: 10/07/2017

To

Mr. TS Shanbhogue

CEO · Odisha

Essar Steel India Ltd.

Udayabata, Dist: Jagatsinghpur, Paradeep-754142

Odisha

Dear Sir,

We have examined the process flowsheets proposed by Essar Steel India Ltd. to beneficiate the iron ore from Sagasahi mine Odisha. The average Fe value of rom is around 61.5% and the Fe value will be enhanced to 64% by physical beneficiation process with 80% yield. The overflow of concentrate thickener will go to process water tank instead of tailings thickener. We endorsed the process flowsheet for physical beneficiation of iron ore.

Thanking you,

With warm regards,

Yours sincerely,

SK Biswal
(Dr. S.K. Biswal)

Head & Chief Scientist

Mineral Processing Department

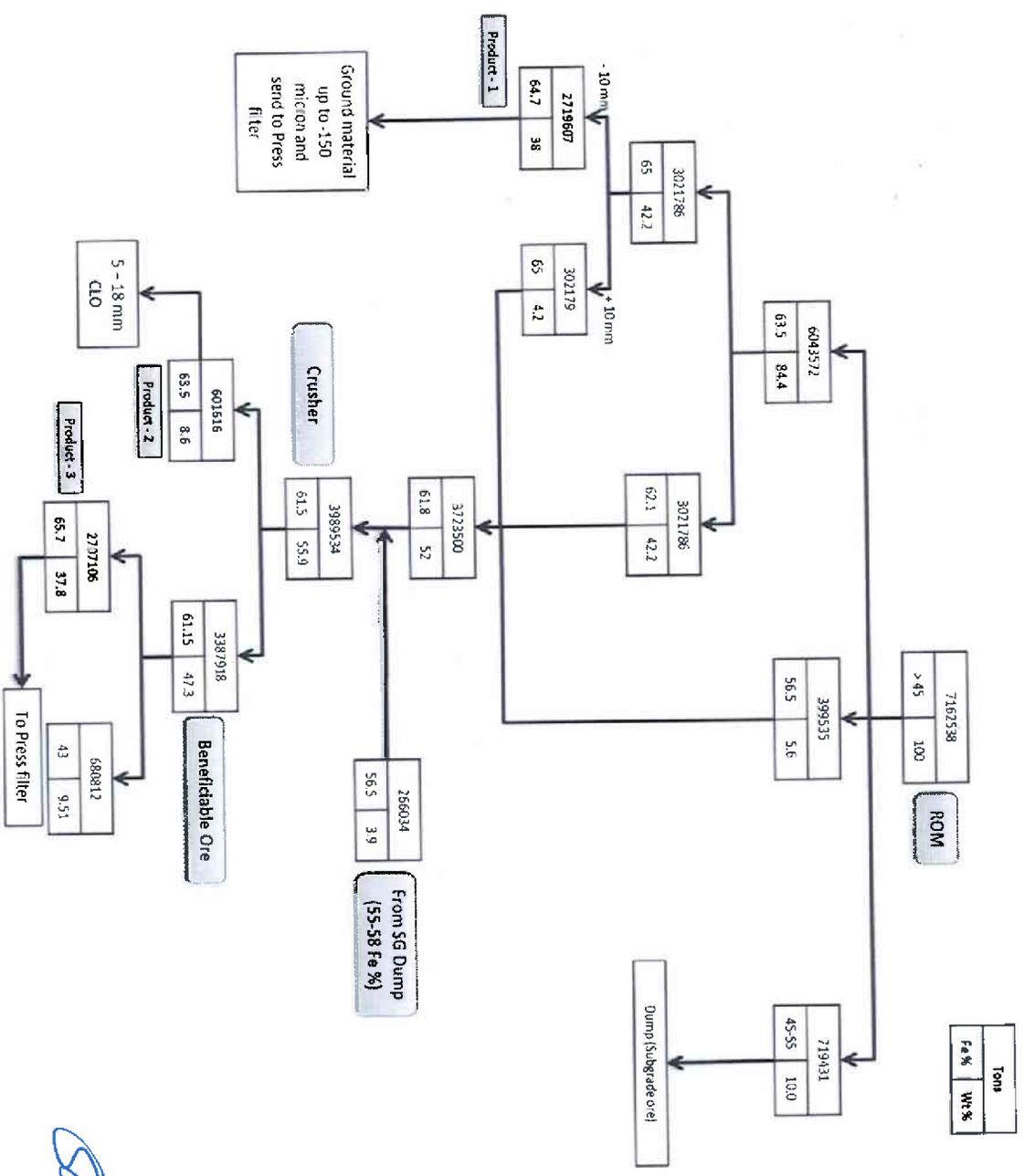
CSIR-IMMT, Bhubaneswar

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MATERIAL BALANCE FOR CRUSHING, SCREENING AND BENEFICIATION PROCESSES

The flow sheet with material balance of screening and crushing and Beneficiation Plant are furnished below:



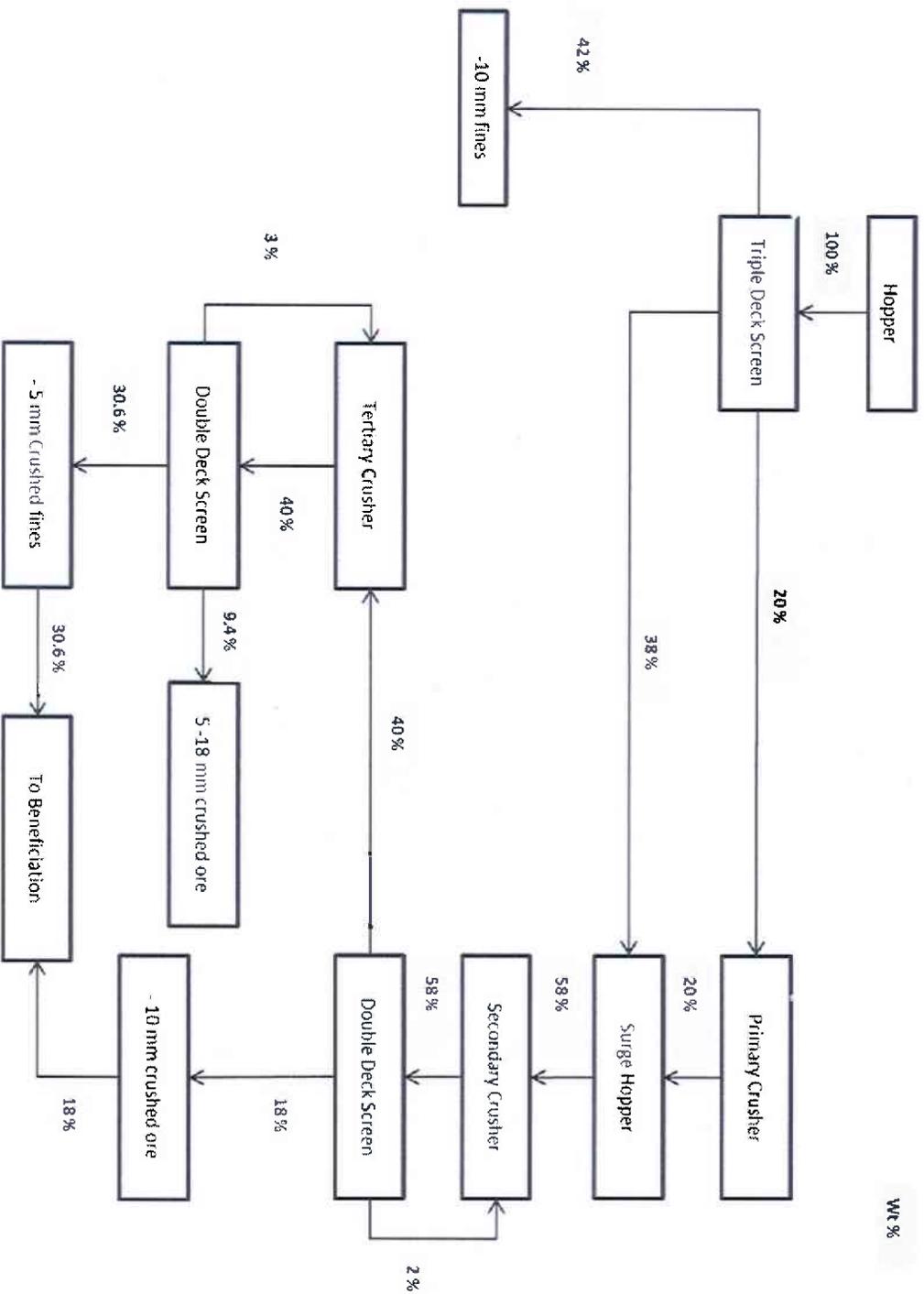
S. Barua
19/11/17

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Minerals Processing Dept.

SRM Institute of Minerals & Materials Technology
Bhubaneswar-751 013, Odisha (India)

EQUIPMENT WISE MASS BALANCE FOR CRUSHING & SCREENING PLANT



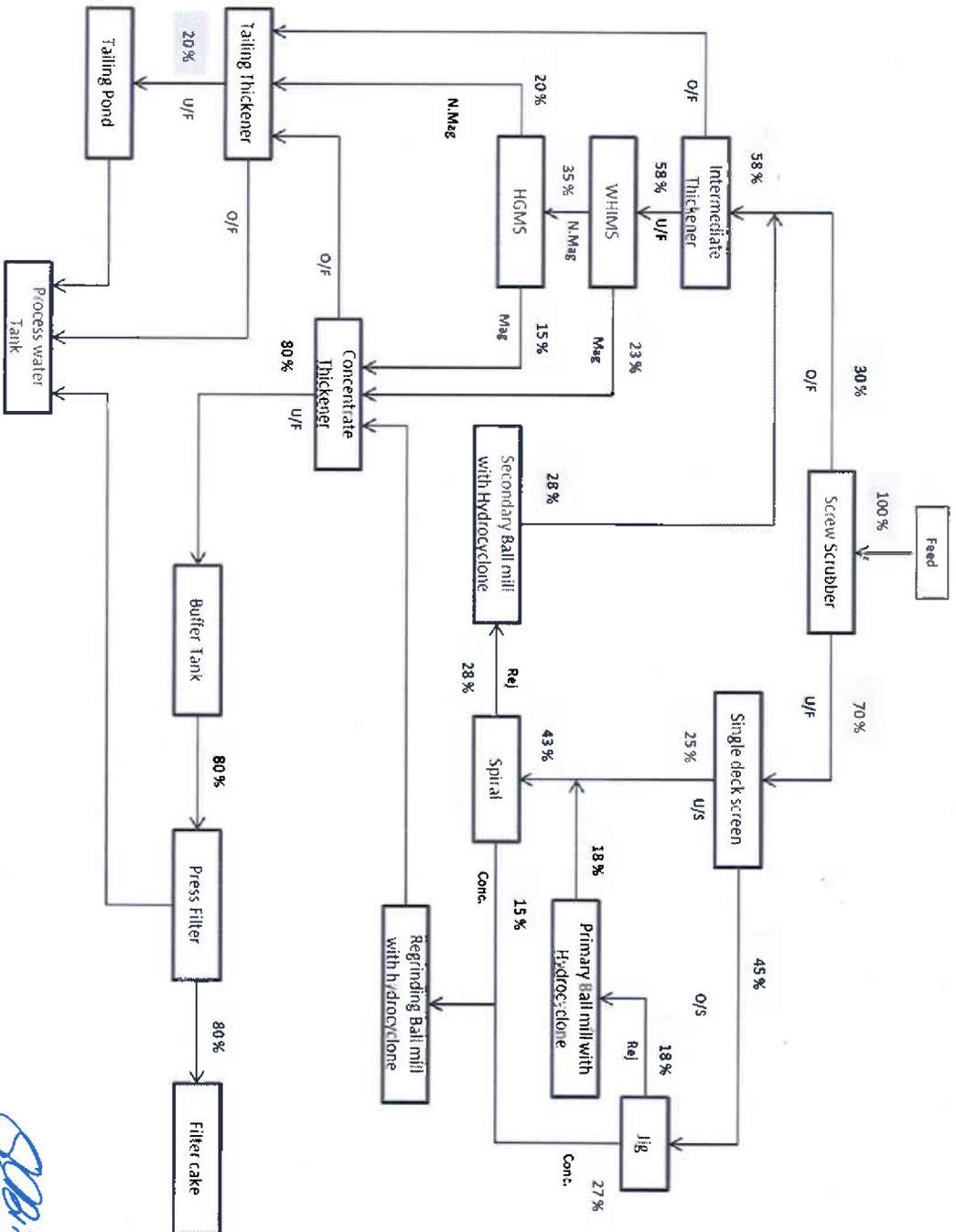
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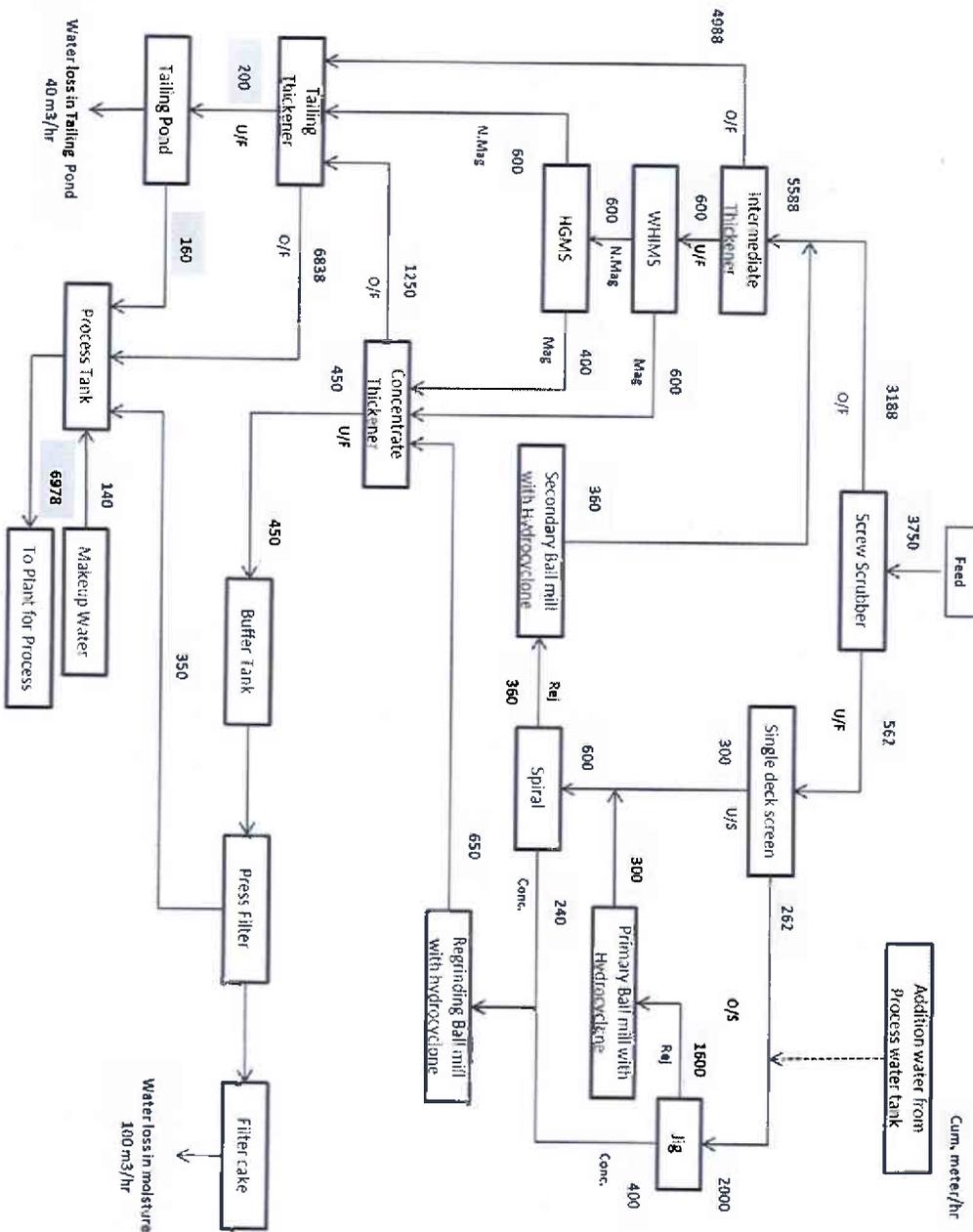
EQUIPMENT WISE MASS BALANCE FOR BENEFICIATION PLANT



Subir
19/7/17

WATER BALANCE FOR BENEFICIATION PLANT

- The total make up water for beneficiation plant will be about 2800 m³/day.
- The water requirement will be fulfilled from bore well.
- The water will be re-used in a cyclic manner so that there will be zero discharge. Besides rainwater harvesting provisions will be implemented and part of the makeup water will be from the harvested water.



S. Anand
10/7/17

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K. J. Somaiya Road, K. J. Somaiya Institute of Technology, K. J. Somaiya Institute of Technology, K. J. Somaiya Institute of Technology