TSUMEB CORPORATION LIMITED

Incorporated in Namibia

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TO: DAVY RESEARCH & DEVELOPMENTLTD. STOCKING-ON-TEES, ENGLAND

ATT: MR. G WIGHTMAN

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DEPT: SMELTER R&D

DATE: 15/12/89

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ASSAY RESULTS FOR TSUMEB BLAST FURNACE SLAG FUMING TEST SAMPLES

Herewith please find the assay results for the samples as received from Stockton.

Also included are a report on the findings of a microprobe analysis on some of the samples brought along from the UK by Ewald Meyer.

If your require any further information please do not hesitate to contact me.

Kind regards,

C. VILJOEN

**TSUMEB CORPORATION LIMITED**

**ASSAY REPORT**

**ASSAY % 13.12.89**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SAMPLE NUMBER** | **DESCRIPTION** | **Cu** | **Pb** | **Zn** | **Fe** | **Ge** | **Ga** | **Na** |
|  | 3rd Hot furnace |  |  |  |  |  |  |  |
| **24** | Feed |  | **2.4** | **10.6** | **15.9** | **0.051** | **0.02** | **0.45** |
| **25** | Slag |  | **0.28** | **3.3** | **17.5** | **0.033** | **0.02** | **0.54** |
| **26** | Metal |  | **3.3** | **0.85** | **31.2** | **0.268** | **0,DD** | **<,01** |
| **27** | Furnace exit/water jacket |  | **12.2** | **59.5** | **2.9** | **D,178** | **0.011** | **0.22** |
| **28** | Primary Scrubber |  | **17.3** | **58.b** | **2.1** | **0.193** | **0.010** | **0.18** |
| **29** | Sleeve 3cm inside |  | **8,9** | **19,9** | **11,7** | **0,100** | **0,015** | **□,39** |
| **30** | Sleeve 15cm inside |  | **1,8** | **4,4** | **18,1** | **J ,025** | **0,009** | **D,43** |
| **31** | Sleeve outside |  | **19,7** | **56,2** | **4,1** | **J,200** | **0 ,02L** | **0,46** |
|  |  |  |  |  |  |  |  |  |
|  | Liquid Samples |  |  |  |  |  |  |  |
|  | (all results in mg/1) |  |  |  |  |  |  |  |
| **32** | Primary scrubber test 1 |  | **<0,1** | **34\*** |  | **<□,5<** | **0 ,025** | **26** |
| **33** | Primary scrubber test 2 |  | **<□,1** | **0,1** |  | **<□,5'** | **0 ,025** | **14** |
| **34** | Primary scrubber test 3 |  | **<□' 1** | **D,1** |  | **<o,5(** | **D ,□25** | **24** |

**ASSAY %**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sample Number** | **Description** | **Cu** | **Pb** | **Zn** | **Fe** | **Ge** | **Ga** | **Na** |
|  | **1st hot furnace** |  |  |  |  |  |  |  |
| **ZF 9** | **Feed** |  | 2,1 | 10,6 | 14,4 | 0,046 | 0 ,020 | o,49 |
| **10** | **Metal** |  | □'1 | 0,1 | 85,8 | D,025 | 0,016 | 0,03 |
| **11** | **Slag** |  | <0,1 | 0,1 | 13,9 | ,001 | 0,019 | 0,60 |
| **12** | **Inside Sleeve 3cm** |  | 9,8 | 21,9 | 10,9 | 0,073 | o,□15 | 0 ,29 |
| **13** | **Inside Sleeve 15cm** |  | 1,6 | 10,0 | 16,1 | 0,018 | 0,012 | 0,72 |
| **19** | **Furnace/water jacket** |  | 7,3 | 8,3 | 9,1 | tJ,174 | 0,019 | □,33 |
| **20** | **Primary scrubber/secondary tower** |  | 13,7 | 158,3 | 2,7 | J,241 | 0,017 | □,19 |
|  |  |  |  |  |  |  |  |  |
|  | **2nd hot furnace** |  |  |  |  |  |  |  |
| **ZF 14** | **Feed** |  | 2,5 | 10,2 | 13,8 | tl,046 | 0,019 | o,44 |
| **15** | **Metal** |  | 3,3 | 1,1 | 46,5 | D,586 | 0,005 | <0,01 |
| **16** | **Slag** |  | 0,2 | 3,7 | 17,1 | b,026 | 0,015 | 0,54 |
| **17** | **Sleeve 3cm** |  | 2,9 | 5,8 | 13, | D,□47 | 0,014 | o,42 |
| **18** | **Sleeve 15cm** |  | 2,0 | 13,4 | 14,9 | D ,032 | 0,013 | D,74 |
| **21** | **Furnace exit/water jacket** |  | 8,3 | 52,9 | 5,0 | 0,141 | 0,01 | 0,25 |
| **22** | **Primary scrubber** |  | 16,0 | 52,1 | 3,2 | □,194 | 0 ,01l | D,23 |
| **23** | **Secondary tower** |  | 8,9 | 44,5 | 4,8 | 4,8 | 0,017 | 0,31 |