

Date

Reference

2024-02-16

2022/2462

Scope of accreditation

Testing according to SS-EN ISO/IEC 17025:2018

SSAB EMEA AB

Luleå

Accreditation number

1083

Laboratoriet, Luleå

A001897-002

Chemical analysis

| <i>Technical area</i> | <i>Parameter</i> | <i>Method</i> | <i>Technique</i> | <i>Measure</i> | <i>Material</i> | <i>Field</i> |
|-----------------------|---------------------|------------------------|-------------------|----------------------|-----------------|--------------|
| Inorganic chemistry | Aluminium, Al | ASTM E415:2021, mod | OES | 0,003-0,20 % | Steel | No |
| | Antimony, Sb | ASTM E415:2021, mod | OES | 0,002-0,025 % | Steel | No |
| | Arsenic, As | ASTM E415:2021, mod | OES | 0,001-0,1 % | Steel | No |
| | Boron, B | ASTM E415:2021, mod | OES | 0,0003-0,013 % | Steel | No |
| | Calcium, Ca | ASTM E415:2021, mod | OES | 0,0004-0,0077 % | Steel | No |
| | Carbon, C | ASTM E1019:2018 | Combustion | 0,001-0,800 % | Steel | No |
| | | ASTM E415:2021, mod | OES | 0,006-1,0 % | Steel | No |
| | Chromium, Cr | ASTM E415:2021, mod | OES | 0,001-2,0 % | Steel | No |
| | Cobalt, Co | ASTM E415:2021, mod | OES | 0,004-0,20 % | Steel | No |
| | Copper, Cu | ASTM E415:2021, mod | OES | 0,001-0,6 % | Steel | No |
| | Lead, Pb | ASTM E415:2021 | OES | 0,002-0,02 % | Steel | No |
| | Manganese, Mn | ASTM E415:2021, mod | OES | 0,01-3,0 % | Steel | No |
| | Molybdenum, Mo | ASTM E415:2021, mod | OES | 0,002-1,0 % | Steel | No |
| | Nickel, Ni | ASTM E415:2021, mod | OES | 0,003-2,0 % | Steel | No |
| | Niob, Nb | ASTM E415:2021, mod | OES | 0,002-0,15 % | Steel | No |
| | Nitrogen, N | ASTM E1019:2018 | Combustion | 0,0007-0,02 % | Steel | No |
| | Phosphorus, P | ASTM E415:2021, mod | OES | 0,003-0,11 % | Steel | No |
| | Silicon, Si | ASTM E415:2021, mod | OES | 0,01-2,5 % | Steel | No |
| | Sulfur, S | ASTM E415:2021, mod | OES | 0,001-0,05 % | Steel | No |
| | Tin, Sn | ASTM E415:2021, mod | OES | 0,002-0,1 % | Steel | No |
| Titanium, Ti | ASTM E415:2021, mod | OES | 0,003-0,29 % | Steel | No | |

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| <i>Technical area</i> | <i>Parameter</i> | <i>Method</i> | <i>Technique</i> | <i>Measure</i> | <i>Material</i> | <i>Field</i> |
|-----------------------|---------------------------|--|------------------|------------------|-------------------------|--------------|
| Inorganic chemistry | Vanadium, V | ASTM E415:2021, mod | OES | 0,001-0,5 % | Steel | No |
| | Zinc, Zn | SS 028152, utg 2 | AAS | 0,05 – 0,50 mg/l | Sea water | No |
| | | | AAS | 0,05 – 0,50 mg/l | Waste water/Leach water | No |
| Water analysis | Ammonium as nitrogen | Inhouse method; Ammonium nitrogen with electrode, version 25 | Electrode | 0,1 – 10 mg/l | Fresh water | No |
| | | | Electrode | 0,1 – 10 mg/l | Sea water | No |
| | | | Electrode | 0,1 – 10 mg/l | Waste water/Leach water | No |
| | Conductivity | SS-EN 27888, utg 1 | Electrode | 1-500 mS/m | Fresh water | No |
| | | | Electrode | 1-500 mS/m | Sea water | No |
| | | | Electrode | 1-500 mS/m | Waste water/Leach water | No |
| | Cyanide, accessible | SS 028177, utg 1 | Photometry | 0,01 – 0,25 mg/l | Fresh water | No |
| | | | Photometry | 0,01 – 0,25 mg/l | Sea water | No |
| | | | Photometry | 0,01 – 0,25 mg/l | Waste water/Leach water | No |
| | pH | SS-EN ISO 10523:2012 | Electrode | 3-10 pH-enheter | Fresh water | No |
| | | | Electrode | 3-10 pH-enheter | Sea water | No |
| | | | Electrode | 3-10 pH-enheter | Waste water/Leach water | No |
| | Phenols | SS 028128, utg 1 | | 1-40 µg/l | Fresh water | No |
| | | | | 1-40 µg/l | Sea water | No |
| | | | | 1-40 µg/l | Waste water/Leach water | No |
| | Suspended solids | SS-EN 872:2005 | Gravimetry | > 2 mg/l | Sea water | No |
| | | | Gravimetry | > 2 mg/l | Waste water/Leach water | No |
| | Total organic carbon, TOC | SS-EN 1484, utg 1 | Combustion | 1 – 100 mg/l | Fresh water | No |
| | | | Combustion | 1 – 100 mg/l | Sea water | No |
| | | | Combustion | 1 – 100 mg/l | Waste water/Leach water | No |

Changes in the scope of accreditation are in bold.