

Issued by an Accredited Testing Laboratory

Contact person RISE Annette Hjorthage Division Materials and Production +46 10 516 52 86 annette.hjorthage@ri.se

Reference 2022-02-11

O100152-1102252

Page 1(2)

Viktor Ingemarsson AB Oljekvarnsgatan 14B 414 65 GÖTEBORG

Analysis of steel

(1 appendix)

Products

One sample submitted by the client.

ST650 Powder steel Sample marking:

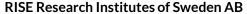
Date of arrival at RISE CPS: 2022-01-10 Date of testing: Week 2 - 6, 2022

Assignment

Determination of C, Al, Si, P, S, Ti, V, Cr, Mn, Co, Ni, Cu, Zr, Nb, Mo, Sb, Ta and W.

Methods

Carbon was determined on filings according to SP0653. All other elements were analysed on a remelted sample with X-ray fluorescence, method SP1494.





Results

Elements	ST650 Powder steel
Carbon, C, weight-%	1.35
Aluminium, Al, weight-% Silicon, Si, weight-%	<0.1 0.40
Phosphorus, P, weight-% Sulfur, S, weight-%	0.029 <0.01
Titanium, Ti, weight-%	<0.01
Vanadium, V, weight-% Chromium, Cr, weight-%	3.1* 13.1 0.39
Manganese, Mn, weight-% Cobalt, Co, weight-%	0.12
Nickel, Ni, weight-% Copper, Cu, weight-%	0.099 0.029
Zirkonium, Zr, weight-%	<0.01
Niobium, Nb, weight-% Molybdenum, Mo, weight-% Antimony, Sb, weight-%	0.47 2.0 <0.01
Tantalum, Ta, weight-% Tungsten, W, weight-%	<0.01 <0.01 1.0

The results refer only to the tested object.

RISE Research Institutes of Sweden AB Chemistry and Applied Mechanics - Chemical Product Safety

Performed by Examined by

Annette Hjorthage Eskil Sahlin

Appendix: Measurement uncertainty

^{*}Outside accredited measuring range.