

HT # D 91129A

37022

**OUTO
KUMPU**

Certificate of Test



* CERTIFICATION *

HEAT D91129A ORDER 0449754/004 SON 737801A BOL 0124039 TAG 1519945 01/29/04

From: Eldon @ ASA

Attn: Laurie

304L

6 1/4" x 10 5/8" long.

403 720 1995

ITEM DESCRIPTION

GRADE 304L/304
Size 304L HEART END BAR 6-1/4 STD Country of Origin: SWE
Country of Origin as defined by NAFTA
Ship Condition A Country of Mfg.: USA

Total Bundles 1 SON Weight 2605

SPECIFICATIONS

MFG TO FINISHED BAR IN THE USA FROM BILLETS IMPORTED FROM SWEDEN
ANS 5839H, 5647H SAE-AMS QQ-S-763
ASME SA182 B01 A03 ASME SA220 B0 CL1 B01
ASME SA479 B01 ASME SA193 B0 CL1 B01 A02
ASTM A182-02 ASTM A262 98 PRACTICE F
ASTM A276 03 ASTM A314 97
ASTM A479 03 ASTM A494 03A
ASTM A320 01 B0 CLASS 1 ASTM A193 01A B0 CLASS 1
DIN 50049/EN 10204 3.1B FED STD QQ-S-763F
UNS S30400/S30403, AISI 304/304L
SOL ANNEALED @ 1900 F MIN. WQ
NO WELD REPAIR
WATER QUENCHED
FREE OF MERCURY CONTAMINATION

MECHANICAL & OTHER TESTS

Test Condition A
Hardness as shipped HB 160 Hardness as tested HB 160
Hardness as shipped HRB 82 Hardness as tested HRB 82
Grain size 5.0 Tensile strength, KSI (MPa) 83.0 (572)
Micro OK 0.2% Yield strength, KSI (MPa) 37.0 (255)
Intergranular corrosion OK
Macro OK Elongation % in 4D 60.0
Reduction of area % 77.0

CHEMICAL COMPOSITION

Carbon (C) .015 Manganese (Mn) 1.600
Phosphorus (P) .025 Sulphur (S) .025
Silicon (Si) .430 Chromium (Cr) 18.210
Nickel (Ni) 8.410 Cobalt (Co) .090
Copper (Cu) .250 Niobium (Nb) .450
Nitrogen (N) .069 Iron (Fe) Balance
Weld Practice EAF
Refining Practice CUP
De-long Ferrite 6.6

Knowingly & willfully falsifying or concealing a material act on this form,
or making false, fictitious or fraudulent statements or representations
herein could constitute a felony punishable under federal statutes.

We hereby certify that the chemical analysis and/or test results shown in
this report are correct as contained in the records of the company.

M.F. Marcano, Quality Manager

Outokumpu Stainless Bar, Inc.
2043 Cherokee Hwy.
Richburg, SC 29729

M.F. Marcano