

SCORE (EUROPE) LIMITED

ENGINEERING RESEARCH • DESIGN • MANUFACTURE • REPAIR

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INVESTOR IN PEOPLE

FIRE TEST REPORT

**IN ACCORDANCE WITH
BS EN ISO 10497:2004**

CUSTOMER: Sento Oy Hogfors
CONTACT: Miikka Lang
P.O. NUMBER: SA81794MJL
VALVE: DN200 PN25 Butterfly Valve

Report Compiled By: **T Hynd**

Date: **16/12/04**

Score Job Number: **150794 COW**

Report No: **150794-1**

150794-1



1



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CONTENTS

	<u>Page Nos.</u>
Front Page	1 of 6
Contents	2 of 6
Valve Details and Test Preparation	3 of 6
Test Report/Results	4 of 6 5 of 6
Certificate/Statement on Production Pressure Tests	6 of 6
Fire Test Certificate	Appendix (a)
Lloyds Certificate	Appendix (b)





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VALVE DETAILS AND TEST PREPARATION

On 16th December 2004 at Score (Europe) Limited, Cowdenbeath, Fife, Scotland, a Fire Test to BS EN ISO 10497:2004 was carried out on behalf of Sento Oy Hogfors.

The valve was selected and supplied by the manufacturer Sento Oy Hogfors.

Details

Type:	Butterfly Valve	Score Report No: 150794-1
Manufacturer:	Sento Oy Hogfors	Size: DN 200 41101CS & 41001CS
Full or Reduced Bore:	Standard	Rating: PN25
Serial No:	No Data	Nameplate Data: 41101CS200 9757
Manufacturer's I.D. No:	No Data	Drawing No: 2529364a dated 16-02-00
Operator:	Manual	

Material:

Body: **ASTM A351 CF8M**
Insert: **N / A**
Stem Seal: **Graphite**
Seat: **EN10028-7 1.4436**

Markings on Valve:

Body Stamping: **CF8M / U274 DN200
PN25 616198**
End Connector Stamping: **N / A**

Test direction flow behind disc

Test Preparation

The valve was removed from transportation package and the above information correlated from the Manufacturer's nameplate/valve body. At the same time the Manufacturer's Test Certificate was checked to ensure the valve has passed their standard production pressure testing. Valve hard stamped with Score Unique Number 150794-1. Valve mounted into test stand with calorimeter cubes and flame environment thermocouples in their appropriate locations as per the standard, these in turn being connected through a Chessell Temperature Recorder with automatic printout facilities. The inlet/outlet pipe work was connected to the valve. With the valve in the partially open position the system was checked for leaks by pressurising to 1.5 times the maximum permissible working pressure at 20°C.

150794-1



W Campbell
20 DEC 2004

3

TEST REPORT

<u>TIME</u>	<u>DESCRIPTION</u>	<u>ACTUAL LEAKAGE IN ML/MIN</u>
<u>12:03 – 12:33</u>	Through seat leakage at test pressure of 12.0 Barg during burn period of 30 min. - (measured Zero ml) Allowable 3,200 ml/min.	Zero ml/min.
<u>12:34 – 12:41</u>	Cool down period took 7 minutes for skin temperature to reach 100°C.	
<u>12:03 – 12:33</u>	External leakage during the burn and cool down period - (measured Zero ml) Allowable 800ml/min.	Zero ml/min.
<u>12:42– 12:47</u>	Through seat leakage on low pressure test at 2 BARG for 5 mins (measured Zero ml) Allowable 320 ml/min.	Zero ml/min
<u>12:49 – 12:54</u>	External leakage after operational test for 5 mins (measured Zero ml) Allowable 200ml/min.	Zeroml/min

Test concluded at this point.

150794-1



4



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TEST RESULTS

Calorimeter cubes and flame environment thermocouples temperature checks.

Probe numbers 7 through 12.

Burner ignited 12.03

<u>No.7</u>	<u>No.8</u>	<u>No.9</u>	<u>No.10</u>	<u>No.11</u>	<u>No.12</u>
Stem	Bottom	Stem	Bottom	Trunnion	Body
Flame	Flame	Calor.Cube	Calor.Cube	Calor Cube	Skin
Temp.° C	Temp.° C	Temp.° C	Temp.° C	Temp °C	Temp.° C

For the duration of this test all temperatures recorded complied with BS EN ISO 10497:2004

Test and temperatures witnessed by Lloyd's Register EMEA.





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TEST RESULTS

From the test results obtained, we confirm the valve tested has met the performance requirements stated in BS EN ISO 10497:2004 and the test is therefore recorded as a PASS.

Range qualified by this test:

Size: DN
DN200 and above

Size: NPS
8" and above

Class: PN
25, 40

Class: Class
150, 300

Test Witnessed by: W Campbell

W Hay
R Hepburn

Lloyd's Register EMEA

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