



ABS GROUP LIMITED
THE PRESSURE EQUIPMENT DIRECTIVE
EC TYPE-EXAMINATION CERTIFICATE

CERTIFICATE NUMBER: 0528-2002-004-PED-T

OFFICE: LONDON

This is to certify that ABS Group Ltd, a Notified Body appointed under the requirements of the Pressure Equipment Directive 97/23/EC and The Pressure Equipment Regulations 1999 of the United Kingdom, did undertake an EC Type Examination of the subject equipment in accordance with the requirements of the said Directive and Regulations. The equipment was found to be in compliance.

This certificate is issued to: Circle Seals Controls, Inc.
Address: 2301 Wardlow Circle
Corona
CA 92880
United States
Description of the equipment: M5100 ASME Series Relief Valves
Type: Safety Relief Valves
Standard: ASME/ANSI B31.1
Maximum allowable pressure: 1200 psi (82.74 bar)
Maximum allowable temperature: 400°F (204.44°C) (Stainless Steel)
350°F (176.67°C) (Brass)
Minimum allowable temperature: -100°F (-73.3°C)
Capacity / Nominal Diameter: M5100-1, M5100-2, M5100-3, M5100-4, M5100-6 & M5100-8
Category under the Regulations: IV

Prototype Examined:

Equipment: Relief Valve
Type: PEDM5159B-1M-U
Serial Number: 1
ABS Group Ltd. report numbers: 2002-6260-H



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Maximum allowable pressure: 1200 psi
Maximum allowable temperature: 350°F (Naval Brass)
400°F (Stainless Steel)
Minimum allowable temperature: -100°F
Capacity / Nominal Diameter: 1/8" Male NPT inlet

Technical Documents Reviewed:

Refer to Attached Schedule

Name of representative: Michael Cooper
Date of Issue: 17 December 2002
Date of Expiry: 16 December 2012

Signature:



ABS GROUP LIMITED
THE PRESSURE EQUIPMENT DIRECTIVE
SCHEDULE TO TYPE EXAMINATION CERTIFICATE

REFERENCE NUMBER: 11112069

DATE: 17 December 2002

Technical Documents Reviewed:

Stress Calculations

PED rating

Hazard Analysis No. 500

M5100-*M (L) (ASME)

M5100-1M

20391 End

M5100-2M

20392 End

M5100-3M

20393 End

M5100-4M

20394

M5100-6M

20395

M5100-8M

20396

PEDM5100

National Board Report 16315A

Particular Material Appraisal: ASTM B21

Particular Material Appraisal: ASTM A479 316

Rev A

98/03/30

8/29/88

00/03/24

8/29/88

9/9/91

8/29/88

10/29/90

8/29/88

8/27/85

3/11/91

20395

6/26/79

1/30/86

02/05/06

13 December 2002

16 October 2002

16 October 2002

M. H. Cooper
For ABS Group Ltd.