



CERTIFICATE NUMBER
02-HG239509-PDA

DATE
05 February 2002

ABS TECHNICAL OFFICE
Hamburg

CERTIFICATE OF Design Assessment

This is to Certify that a representative of this Bureau did, at the request of
Rasmussen GmbH

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate; and it will remain valid for five years from the date of issue or until the Rules or specifications used in the assessment are revised (whichever occurs first).

PRODUCT: Pipe Couplings (Connectors)
MODEL: PG1, CG1
ABS RULE: 2002 SVR, 4-6-2/5.13/5.7.4; 4-6-3/ Table I
OTHER STANDARD: N.A.

AMERICAN BUREAU OF SHIPPING


H. Grommel

Rasmussen GmbH

Rasmussenstrasse

Gerbershausen

D-37318

Germany

Telephone : 49-36081-629-0

Fax : 49-36081-629-30

Certificate No:

Main Company Address:

Postfach 1149

Maintal, Germany 63461

Tel. No. 49-6181-403315

Fax No. 49-6181-403-1-315

Product : Pipe Couplings (Connectors)**Model Name:** CG1, PG1**Intended Service:**

For installation in shipboard piping systems and used for connecting sections of strain loaded pipes.

Description:

Models are: Normaconnect CG1 and PG1.

* Normaconnect: CG1 - Axial restraint pipe connectors for synthetic to metallic pipe connections, secured against tension. Stainless steel couplings available of materials identified by manufacturer's group designations W2, W4 and W5, with non metallic sleeves of "EPDM" or "NBR" material.

All couplings with standard strip insert, heavy duty locking trunnions, double lip sealing arrangement, and optional support sleeve. The anchoring device for "CG1" couplings consists of a conical stamped grip ring in way of mating metal to metal surfaces and of a ring with flat multi-row claws at mating metal to synthetic surfaces.

II. Normaconnect: PG1 - Axial restraint pipe connectors for connection of synthetic pipes, secured against tension. Stainless steel couplings available of materials identified by manufacturer's group designations W2, W4 and W5, with non metallic sleeves of "EPDM" or "NBR" material.

All couplings with standard strip insert, heavy duty locking trunnions, double lip sealing arrangement, and optional support sleeve. The anchoring device for "PG1" couplings consists at both ends of a ring with flat multi-row claws at mating metal to synthetic surfaces.

Normaconnect: CG1 (Diameter range: OD- Steel/Plastic pipe 38.0/40.0 to 168.3/168.3 mm).

Normaconnect: PG1 (Diameter range: - OD 40.0 to 168.3 mm).

Ratings:

CG1: Nominal pressure rating (ND) all sizes 16 bar.

PG1: Nominal pressure rating (ND) all sizes 16 bar.

Service Restrictions:

Usage of "CG1" and "PG1" pipe couplings limited to where no fire endurance test required by 4-6-3/Table 1 of the ABS Rules.

Generally, slip type expansion joints are not to be used in systems listed herebelow:

Any class I piping system.

Steering gear hydraulic systems.

Starting air systems.

Boiler feed water systems.

CO-2 and other fixed gas fire extinguishing systems.

Chemical cargo piping systems.

Cargo oil lines located in pipe duct keels.

Bilge pipelines located in cargo holds, deep tanks and double bottom tanks.

Fuel oil, lubricating oil, hydraulic oil and thermal oil lines of class III systems located in machinery spaces of category A, accommodation spaces or non-mechanically ventilated pipe duct keels.

Fuel oil, lubricating oil, hydraulic oil and thermal oil lines of Class II systems

or where the use of slip type expansion joints is specifically prohibited by the Rules, e. g. for ballast piping on oil carriers.

Comments:

Rasmussen GmbH

Rasmussenstrasse

Gerbershausen

D-37318

Germany

Telephone : 49-36081-629-0

Fax : 49-36081-629-30

Certificate No:

Main Company Address:

Postfach 1149

Maintal, Germany 63461

Tel. No. 49-6181-403315

Fax No. 49-6181-403-1-315

The maximum piping misalignment and maximum allowable axial movement per coupling is to be limited as per manufacturer's specification.

The installation of the couplings is to be carried out according to manufacturer's specifications.

Support sleeves to be utilized as per manufacturer's recommendation.

When this equipment is installed on ABS classed vessels/facilities the intended specific installation is subject to approval on a case by case basis.

Term of Validity:

This product/model is covered under Product Design Assessment (PDA) Certificate # 02-HG239509-PDA, dated 02/Feb/2002. This PDA Certificate expires February of 2007. It will remain valid for the 5 years from date of issue or until the Rules or specifications used in the assessment are revised (whichever occurs first).

STANDARDS**ABS Rules:**

2002 SVR, 4-6-2/5.13/5.7.4, 4-6-3/Table 1.

Government Authority:**International:****National:****Others:**