



CERTIFICATE NUMBER

13-GE1105281-PDA

DATE

05 November 2013

ABS TECHNICAL OFFICE

Genoa Engineering Department

# CERTIFICATE OF DESIGN ASSESSMENT

This is to Certify that a representative of this Bureau did, at the request of  
**FIP - FORMATURA INIEZIONE POLIMERI S.P.A. - CASELLA  
(GE)**

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.

PRODUCT: **Thermoplastic Pipe, Fittings and Joints**

MODEL: **PVC-U Pipes, Fittings and Valves**

This Product Design Assessment (PDA) Certificate 13-GE1105281-PDA, dated 05/Nov/2013 remains valid until 04/Nov/2018 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING

  
Lucio Trevisan  
Engineer

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

**FIP - FORMATURA INIEZIONE POLIMERI S.P.A.**

LOCALITA PIAN DI PARATA 16015 CASELLA (GE)

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**Product:** Thermoplastic Pipe, Fittings and Joints**Model:** PVC-U Pipes, Fittings and Valves**Intended Service:**

Class III piping systems for non-essential services as salt and freshwater systems including bilge, ballast, deck wash, sanitary and cooling water systems, scuppers.

**Description:**

PVC-U pipes, valves and fittings with seals in EPDM or FPM.

**Ratings:**

See attachment

**Service Restrictions:**

Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined. Production tests to be carried out as per 4-6-3/9 and 4-6-3/19 of the ABS Rules.

1. Usage limited to applications where "no fire endurance test" is required by 4-6-3/ Table 1 of the ABS Rules.
2. The valves are not to be used as ship side valves.
3. Detailed drawings of piping system for each application on board are to be submitted for review.
4. Acceptability of flame spread tests performed in accordance with ASTM D635 may be subject to approval by the Administration of the vessel's Registry.
5. Not to be used for any installation within tanks or other locations which may be subject to a head of liquid on the outside of the pipe.
6. Not to be used to convey fluids with a conductivity of less than 1000 pico-siemens per meter, nor for installation in hazardous areas (regardless of conveyed fluid)
7. Pipes and fittings assembly is to be carried out in accordance with Manufacturer's specification.

**Comments:**

Not Applicable

**Term of Validity:**

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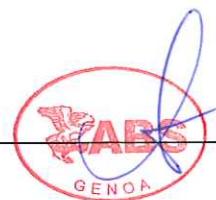
**STANDARDS****ABS Rules:**

2013 Steel Vessel Rules 1-1-4/Appendix 3, 4-6-3/5, 4-6-3/7, 4-6-3/9, 4-6-3/19

As of 05/Nov/2013

Design Assessment

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**National:**

NA

**International:**

ISO 15493

**Government Authority:**

NA

**EUMED:**

NA

**Others:**

NA





Type: VXE PVC-U		
easyfit 2-way ball valve		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
10	16	0÷60
15	16	0÷60
20	16	0÷60
25	16	0÷60
32	16	0÷60
40	16	0÷60
50	16	0÷60
65	16	0÷60
80	16	0÷60
100	16	0÷60

Type: VEE PVC-U		
easyfit 2-way ball valve		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
10	16	0÷60
15	16	0÷60
20	16	0÷60
25	16	0÷60
32	16	0÷60
40	16	0÷60
50	16	0÷60
65	16	0÷60
80	16	0÷60
100	16	0÷60

Type: VKD PVC-U		
dual block 2-way ball valve		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
10	16	0÷60
15	16	0÷60
20	16	0÷60
25	16	0÷60
32	16	0÷60
40	16	0÷60
50	16	0÷60
65	16	0÷60
80	16	0÷60
100	16	0÷60



Type: TKD PVC-U		
dual block 3-way ball valve		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
10	16	0÷60
15	16	0÷60
20	16	0÷60
25	16	0÷60
32	16	0÷60
40	16	0÷60
50	16	0÷60

Type: FK PVC-U		
butterfly valve		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
40	16	0÷60
50	16	0÷60
65	10	0÷60
80	10	0÷60
100	10	0÷60
125	10	0÷60
150	10	0÷60
200	10	0÷60
250	10	0÷60
300	8	0÷60

Type: FE PVC-U		
butterfly valve		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
40	16	0÷60
50	16	0÷60
65	10	0÷60
80	10	0÷60
100	10	0÷60
125	10	0÷60
150	10	0÷60
200	10	0÷60



Type: SXE PVC-U		
easyfit check valve		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
10	16	0÷60
15	16	0÷60
20	16	0÷60
25	16	0÷60
32	16	0÷60
40	16	0÷60
50	16	0÷60
65	16	0÷60
80	16	0÷60
100	16	0÷60

Type: VM PVC-U		
diaphragm valve		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
10	10	0÷60
15	10	0÷60
20	10	0÷60
25	10	0÷60
32	10	0÷60
40	10	0÷60
50	10	0÷60
65	10	0÷60
80	10	0÷60
100	10	0÷60

Type: CM PVC-U		
compact diaphragm valve		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
12	6	0÷60
15	6	0÷60

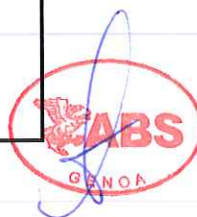
Type: VV PVC-U		
angle seat valve		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
10	16	0÷60
15	16	0÷60
20	16	0÷60
25	16	0÷60
32	10	0÷60
40	10	0÷60
50	10	0÷60
65	10	0÷60
80	6	0÷60
100	6	0÷60



Type: VR PVC-U		
angle seat check valve		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
10	16	0÷60
15	16	0÷60
20	16	0÷60
25	16	0÷60
32	16	0÷60
40	16	0÷60
50	16	0÷60
65	10	0÷60
80	6	0÷60
100	6	0÷60

Type: RV PVC-U		
sediment strainer		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
10	16	0÷60
15	16	0÷60
20	16	0÷60
25	16	0÷60
32	16	0÷60
40	16	0÷60
50	16	0÷60
65	10	0÷60
80	6	0÷60
100	6	0÷60

Type: VA PVC-U		
air release valve		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
10	16	0÷60
15	16	0÷60
20	16	0÷60
25	16	0÷60
32	16	0÷60
40	16	0÷60
50	16	0÷60



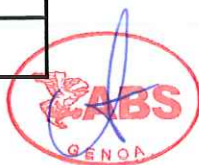
Type: VZ PVC-U		
foot valve		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
10	16	0÷60
15	16	0÷60
20	16	0÷60
25	16	0÷60
32	16	0÷60
40	16	0÷60
50	16	0÷60

Type: VM/RM PVC-U		
diaphragm valve/tap		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
8	10	0÷60
15	10	0÷60

Type: CR PVC-U		
clapet check valve		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
40	5	0÷60
50	5	0÷60
65	5	0÷60
80	5	0÷60
100	5	0÷60
125	5	0÷60
150	5	0÷60
200	5	0÷60
250	5	0÷60
300	5	0÷60

Type: PVC-U fittings		
fittings (excluding unions)		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
8÷150	16	0÷60
200÷300	10	0÷60

Type: PVC-U fittings		
unions		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
10÷50	16	0÷60
65÷100	10	0÷60





Type: PVC-U pipes		
pipes		
Nominal internal diameter	Max Working Pressure	Working Temperature
DN	bar	°C
10÷150	16	0÷60
200÷300	10	0÷60

