



TYPE APPROVAL CERTIFICATE

Certificate No:
TAP00000CR
Revision No:
1

This is to certify:

That the Pipe Couplings, Bite and Compression Type

with type designation(s)
FPL

Issued to

IMI International Sp. z.o.o.
Olkusz, Poland

is found to comply with

DNV rules for classification – Ships Pt.4 Ch.6 Piping systems
DNV class programme DNV-CP-0185 – Type approval – Mechanical joints

Application :

Product(s) approved by this certificate is/are accepted for installation on vessels classed by DNV.

Temperature range: -20°C to +100°C
Max. working press.: 16 bar
Sizes: outside dia.: 6 to 54 mm

Issued at **Høvik** on **2023-06-05**

for **DNV**

This Certificate is valid until **2026-06-29**.

DNV local unit: **Katowice CMC**

Approval Engineer: **Sarah Miller**

Zeinab Sharifi
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

Bite type pipe couplings: Unions, elbows, wall brackets, tees and manifolds.

Material: AMETAL (TA Hydronics AB trademark) special brass alloy - Dezincification resistant (CuZn33Pb2Si-C (CC751S) according to EN1982)

Application/Limitation

Couplings covered by this certificate are only to be used in piping classes I, II and III in below applications ⁽²⁾:

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| <p>1) Inert gas</p> <ul style="list-style-type: none">- Water seal effluent lines- Scrubber effluent lines <p>2) Flammable fluids (flash point > 60°C)</p> <ul style="list-style-type: none">- Fuel oil lines ⁽¹⁾- Lubricating oil lines ⁽¹⁾- Hydraulic oil ⁽¹⁾- Thermal oil ⁽¹⁾ <p>3) Fresh water</p> <ul style="list-style-type: none">- Cooling water system ⁽²⁾- Condensate return ⁽²⁾- Non-essential system <p>4) Sea water</p> <ul style="list-style-type: none">- Water filled fire extinguishing systems, e.g. sprinkler systems ⁽¹⁾- Ballast system ⁽²⁾- Cooling water system ⁽²⁾- Tank cleaning services- Non-essential systems <p>5) Sanitary/drains/scuppers</p> <ul style="list-style-type: none">- Deck drains (internal) ⁽³⁾- Sanitary drains- Scuppers and discharge (overboard) | <p>6) Sounding/vent</p> <ul style="list-style-type: none">- Water tanks/dry spaces- Oil tanks (f.p. > 60°C) ⁽¹⁾ <p>7) Miscellaneous</p> <ul style="list-style-type: none">- Starting/control air- Service air (non-essential)- Brine- Steam |
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Mechanical joints covered by this certificate does not include any components which may readily deteriorate in case of fire and hence they are of fire-resistant types, considering the following additional footnotes:

- 1) Approved fire-resistant types except in cases where such mechanical joints are installed on exposed open decks, as defined in SOLAS II-2/Reg. 9.2.3.3.2.2(10) and not used for fuel oil lines.
- 2) Fire endurance test shall be applied when mechanical joints are installed in machinery spaces of category A.
- 3) Only above bulkhead deck of passenger ships and freeboard deck of cargo ships.

The couplings are not to be used on tubes in cold fabricated (hard temper) conditions.

Only to be used in readily accessible spaces.

All castings shall be made at foundries approved by the Society. (DNV rules Pt.2 ch.2 Sec.11 [1.6.1])

Type Approval documentation

- Manufacturer's catalogue 4-5-5 SE FPL 10.2015
- Test Report No. E30007 dated 1991-08-16, Swedish National Testing and Research Institute
- Test report No PUR1250 dated 2012-10-12 & PUR1539-4 dated 2016-04-12
- Reports no 99E1 3418 dated 1999-10-22, 99E1 3418-1 dated 2000-01-04, 99E1 3418-2 dated 2000-12-15, 99E1 3418-3 dated 2001-03-23, P101066 dated 2001-02-01

Tests carried out

Leakage, Repeated Assembly, Burst Pressure, Pull-Out, Vibration and Pressure Pulsation Test

Marking of product

For traceability to this Type Approval, the products are at least to be marked with:

- Manufacturer's name or trade mark
- Type designation



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- Maximum working pressure
- Size

Periodical assessment

For retention of the Type Approval, DNV Surveyor shall perform a periodical assessment every second year, to verify that the conditions for the type approval are complied with and to witness burst tests on elbows and tees for selection of sizes.