

COPY



NIPPON KAIJI KYOKAI

Certificate

Certificate No.
TA23631E(N)

OF

APPROVAL

Item : Plastic Pipe, Fittings and Valves
Product name : TemperFIP100 PVC-C Pipes, Fittings and Valves
Applicant : FIP - Formatura Iniezione Polimeri S.p.A.
Pian di Parata, Casella, Italy
Manufacturer : The same as the Applicant.
Specifications : See Annex.
Testing standard : Chap.6, Part 6. of "*Guidance for The Approval and Type Approval of Materials and Equipment for Marine Use*"
Condition for use : See Annex.

THIS IS TO CERTIFY that the above type of products has been approved by Nippon Kaiji Kyokai with type approval No. NKPP073 as complying with the relevant requirements of the Society's *Rules for the Survey and Construction of Steel Ships*.

This certificate is valid until 12 June 2028.

Issued at Tokyo on 13 June 2023.

NIPPON KAIJI KYOKAI


Y. Takao
General Manager
Material and Equipment Department

The seal is a circular stamp of Nippon Kaiji Kyokai. It contains the same 'MK' monogram and text as the logo in the top left corner: 'NIPPON KAIJI KYOKAI' at the top, 'ClassNK' at the bottom, and 'Founded 1899' in the center.



1. Specifications

1.1 Plastic pipes:

Type	ISO-UNI PIPE		
Material	PVC-C		
Max Working Temperature (°C)	80		
Outside Diameter (mm)	16 - 160	110 - 160	
Nominal Pressure	Internal (bar)	16	10
	External (bar)	N/A	
Category *1	G, S		
Fire Endurance	N/A		

*1; Category Symbol "G" means that this material has "Low flame spread", "S" means that this product is complied with "Smoke generation and toxicity test".

1.2 Fittings: ISO-UNI FITTINGS (Bends, tees, sockets, unions, reductions, caps, stubs)



1.3 Valves:

Type	Designation	Nominal Diameter (mm)	Nominal Pressure (bar)
VKD	Dual block 2-way ball valve	10 - 100	16
TKD	Dual block 3-way ball valve	10 - 50	16
VXE	Easyfit 2-way ball valve	10 - 100	16
SXE / SSE	Easyfit check valve	10 - 100	16
FK	Butterfly valve	40 - 300	16, 10, 8
DK	2-way diaphragm valve	15 - 65	10
VM	Diaphragm valve	80 - 100	10
CM	Compact diaphragm valve	12 - 15	6
RV	Sediment strainer	15 - 50	16, 10
111 HTA / VHCEP	Ball valve	20 - 63	16
ONEPIECE HTA	One piece ball valve	20 - 63	25
HTA VHFLOW CARE20	Balancing valve	20	16
HTA VHFLOW CHEA20	Check valve	20	16
HTA VHFLOW CHEB20	Check valve	20	16

2. Limitations

- 2.1 The approval applies only for installation of piping systems onboard ships which will not be subjected to vacuum conditions inside the pipe nor a head of liquid acting on the outside of the pipe.
- 2.2 The approval covers water pipes of non-essential systems where fire endurance performance is not required.



3. Condition for use

3.1. On Plastic Pipes, the followings are to be marked.

- (1) Trade name and/or product name
- (2) NK's approval, such as "NK-Approved"
- (3) Nominal pressure
- (4) Symbol "G", "S", as necessary
- (5) The design standards to be applied

3.2. Particulars, manufacturing method and material of Plastic Pipes are to be same as those in the original approval tests. Any alternation to the above items is to be informed to the Society for approval. Our surveyor reserves the right to access to the manufacturing facilities and may require further test and/or examination where deemed necessary.

3.3. Plastic Pipes are to be tested after manufacture in accordance with the requirement of "1.7.1 Shop Tests, Annex 12.1.6 PLASTIC PIPES of Part D, Rules for the Survey and Construction of Steel Ships".

3.4. The installation of the piping system is to be carried out in accordance with "Annex 12.1.6 PLASTIC PIPES of Part D, Rules for the Survey and Construction of Steel Ships".

3.5. Plastic Pipes are to be subject to the periodical examination at interval of five years after the date of approval.