



# NIPPON KAIJI KYOKAI

## *Certificate*

Certificate No. 09HG0003PP

### *OF APPROVAL*

Article : Plastic Pipes  
Product Description : BONDSTRAND PIPE SERIES  
2000M, 5000M, 7000M, S2000M-FP,  
PSX-L3  
Manufacturer : AMERON PTE LTD, SINGAPORE  
Specifications and  
Condition for use : See APPENDIX

THIS IS TO CERTIFY that the above mentioned Plastic pipes are found to comply with the requirements of Chap.6, Part 6 of "GUIDANCE FOR THE APPROVAL AND TYPE APPROVAL OF MATERIALS AND EQUIPMENT FOR MARINE USE" and other relevant requirements of the Society.

This certificate will remain in force until 20<sup>th</sup> January, 2014.

Issued at Tokyo on the 21<sup>st</sup> January, 2009.

NIPPON KAIJI KYOKAI

(Y.Nakamura)

General Manager  
Hull Department

## I . Particulars of Plastic pipes

Type		2000M	5000M	7000M	2000M-FP	PSX-L3
Resin		Epoxy	Vinylester	Epoxy	Epoxy	Phenolic
Max Working Temperature (°C)		93	93	93	93	93
Nominal Diameter (mm)		25 to 900	50	25 to 900	25 to 400	25 to 400
Nominal Pressure	Internal (bar)	16	16	16	16	16
	External (bar)	4.3	4.0	4.3	4.3	-
Category* <sup>1</sup>		G	G	G,D	G	G
Fire Endurance* <sup>2</sup>		L3	-	L3	L3* <sup>3</sup>	L3

\*1; Category Symbol "G" means that this material has "low flame spread characteristics" and "D" means that have electrically conductive.

\*2; Fire Endurance Level L3: Fire endurance test (IMO Res.A753(18) Appendix 2) in wet conditions, 30 min

\*3; The 2000M-FP pipe and fitting were tested with an impinging jet fire and are able to withstand a jet fire exposure with an initial 5 minutes dry condition follows by another 15 minutes in a wet condition. Reference is made to Southwest Research Institute Test Report (Project No.01-6234-001).

II . On Plastic pipes, the followings should be marked.

- (1) Trade name and/or product name
- (2) NK' s approval, such as "NK-Approved"
- (3) Nominal pressure
- (4) Category "G" and/or "D"
- (5) Fire Endurance Level "L3"
- (6) Material of which pipe or fitting is made

III . Particulars, manufacturing method and material of Plastic pipes should be same as those in the original approval tests. Any alternation to the above items should 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 necessarily.

IV . Plastic pipes should be tested after manufacture in accordance with Annex D12.1.6-2 "Shop Tests" of "GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF PLASTIC PIPES".

V . Plastic pipes should be subject to the periodical examination at interval of five years after the date of approval.

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