



# NIPPON KAIJI KYOKAI

## TYPE APPROVAL CERTIFICATE

Certificate No. TA09643M

**This is to certify** that the undernoted product has been approved in accordance with the relevant requirements of "Rules for the Survey and Construction of Steel Ships" and "Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use".

This certificate is issued to

Manufacturer:	<b>SWAGELOK COMPANY, U.S.A.</b>
Product description	<b>DOUBLE FERRULE TYPE TUBE FITTINGS</b>
Type designation(s):	<b>SWAGELOK Tube Fitting</b>
Test Standards:	<b>IACS UR P2</b>
Approval No.:	<b>95 FV 101 B</b>
Valid until:	<b>31 January 2015</b>

This certificate is subject to the conditions specified in the attached sheet(s).

Issued at Tokyo on 24 December 2009.

T. Narisawa  
General Manager  
Machinery Department

Attached sheet to the Certificate No.TA09643M

• Particulars and conditions :

Series	Tube Size	Design pressure (MPa)	Design temperature (°C)	Material
100 ~ 3200	1/16 ~ 2B	22.57 ~ 77.50	-196 ~ 93	SUS316 (316 Stainless Steel)
		20.61 ~ 73.58	-196 ~ 204	
		17.66 ~ 65.73	-196 ~ 300	
200 ~ 3200	1/8 ~ 2B	18.64 ~ 52.00	-29 ~ 40	SCPH (Carbon Steel)
		15.70 ~ 44.15	-29 ~ 191	
200 ~ 1610	1/8 ~ 1B	29.43 ~ 69.66	-40 ~ 40	NCuP (Alloy 400)
		25.51 ~ 60.83	-40 ~ 93	
		22.57 ~ 54.94	-40 ~ 300	
200 ~ 1610	1/8 ~ 1B	9.81 ~ 24.53	-29 ~ 40	C3601B (Brass)
		7.85 ~ 19.62	-29 ~ 93	
		4.91 ~ 11.78	-29 ~ 204	
3 ~ 38MO	3 ~ 38A	29.43 ~ 62.79	-196 ~ 93	SUS316 (316 Stainless Steel)
		26.49 ~ 59.85	-196 ~ 204	
		23.55 ~ 52.98	-196 ~ 300	
3 ~ 38MO	3 ~ 38A	18.64 ~ 52.00	-29 ~ 40	SCPH (Carbon Steel)
		15.70 ~ 44.15	-29 ~ 191	
6 ~ 25MO	6 ~ 25A	20.61 ~ 56.90	-40 ~ 40	NCuP (Alloy 400)
		17.66 ~ 50.04	-40 ~ 93	
		15.70 ~ 44.15	-40 ~ 300	
3 ~ 25MO	3 ~ 25A	7.85 ~ 22.57	-29 ~ 40	C3601B (Brass)
		5.89 ~ 17.66	-29 ~ 93	
		3.93 ~ 10.80	-29 ~ 204	

Note: Design pressure, design temperature, and materials are specified in accordance with the manufacturer's catalogs. (No.MS-01-140 "Gaugeable Tube Fittings and Adapter Fittings" and No.MS-01-107 "TUBING DATA")

Attached sheet to the Certificate No.TA09643M

Part Material	Kind of Fluid
SUS316 (316 Stainless Steel)	Air, Hydraulic oil, Lubricating oil, Fuel oil, Steam, Fresh water, Natural gas
SCPH (Carbon Steel)	Air, Hydraulic oil, Lubricating oil, Fuel oil, Steam
NCuP (Alloy 400)	Air, Hydraulic oil, Lubricating oil, Fuel oil, Fresh water, Sea water
C3601B (Brass)	Air, Hydraulic oil, Lubricating oil, Fuel oil, Fresh water, Sea water, Steam

• **Test :**

The pipe fittings used for piping belonging to Group I & II defined by the requirements 12.1.3, Chapt.12, Part D of the Rules are to be subjected to hydraulic test in the presence of the Society's surveyor in accordance with the requirements 12.6.1, Chapt.12, Part D of the Rules.

• **Notice :**

Any significant changes in design or construction of the above items may render this certificate invalid.

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