



Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	HKS GmbH
Address	Schonenfahrerstr. 1, Rostock, 18057, Germany
Place of Production	HKS - CZ s.r.o. Mlekojedaska 1994/7, Litomerice, 412 01, Czech Republic
Type	Metal Expansion Joint
Description	Stainless steel (1.4404/316L; 1.4541/321; 1.4571/316Ti) multiple layer expansion joints with or without inner sleeve
Trade Name	Axial : AN/AF; Universal : AM/AP; Lateral : RM; Angular : WN
Application	For use in metallic LNG/LPG cargo piping systems and Reformat systems
Specified Standard	Lloyd's Register Rules and Regulations for the Classification of Ships, 2022 and EJMA, 10 th Edition

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Ratings	Medium :	LNG/LPG	Reformat
	Type :	AN/AF, AM/AP, RM, WN	AN/AF
	Design Temperature :	-196 °C to +125 °C	-55 °C to 550 °C
	Design Pressure :	16 bar	-0.5 bar to 16 bar
	Design Cycle :		7000
	Nominal Diameter :		DN25 to DN400

For allowable movements see the corresponding Design Appraisal Document

Other Conditions	For application in Reformat systems material grade 1.4404/316L or 1.4571/316Ti only. Not to be used where double walled installations are required by the Rules
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This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: LR22150900TA

The Design Appraisal Document HTS/ENS 35559-17, Issue No. 3 and its supplementary Type Approval Terms and Conditions form part of this Certificate.