

# Authorized Steel Grades by Product Type

Note: For special requests, please confer with your Sumitomo Metals sales representative.

## 1. Steel Plates for Hulls

Ship Register	Authorized Steel Grade	Remarks
Nippon Kaiji Kyokai (NK)	KA, KB, KD, KE, KA32, KD32, KE32, KA36, KD36, KE36, KA40, KD40, KE40, KA43, KD43, KE43, KA47, KD47, KE47, KA51, KD51, KA56, KD56, KA63, KD63, KA63N, KD63N, KF63, KA70, KD70, KA70N, KD70N, KE70N	Steel manufactured by SSC and DAC processes is also approved.
Lloyd's Register of Shipping (LR)	A, B, D, E, AH32, DH32, EH32, AH36, DH36, EH36, AH34S, DH34S, EH34S, AH40, DH40, EH40	Steel manufactured by SSC and DAC processes is also approved.
Bureau Veritas (BV)	A, B, D, E, AH32, DH32, EH32, AH36, DH36, EH36, AH40, DH40, EH40	Steel manufactured by SSC and DAC processes is also approved.
American Bureau of Shipping (AB)	A, B, D, E, DS, CS, AH32, DH32, EH32, AH36, DH36, EH36, AH40, DH40, EH40	Steel manufactured by SSC and DAC processes is also approved.
Det Norske Veritas (NV)	A, B, D, E, A27S, D27S, E27S, A32, D32, E32, A36, D36, E36, A40S, D40S, E40S, D420, E420, F420	Steel manufactured by SSC and DAC processes is also approved.
Chinese Register of Shipping (CR)	A, B, D, E, AH32, DH32, EH32, AH36, DH36, EH36	Steel manufactured by SSC and DAC processes is also approved.
Korean Register of Shipping (KR)	RA, RB, RD, RE, RA32, RD32, RE32, RA36, RD36, RE36, RA46, RD46, RE46	Steel manufactured by SSC and DAC processes is also approved.
German Lloyd's Register of Shipping (GL)	A, B, D, E, A32, D32, E32, A36, D36, E36, A40, D40, E40	Steel manufactured by SSC and DAC processes is also approved.
Register of Italy (RI)	A, S, D, SS, E, ERS36, ERSS36, ERE36	—
Chinese Classification Society (CCS)	A, B, D, E, A32, D32, E32, A36, D36, E36	Steel manufactured by SSC and DAC processes is also approved.
Russian Classification Society (RS)	A, B, D, E, A32, D32, E32, F32, A36, D36, E36, F36	Steel manufactured by SSC and DAC processes is also approved.

- (Note) 1. SSC (Sumitomo's Special Controlling) Process and DAC (Dynamic Accelerated Cooling) Process: Both are based on the TMCP process and an SMI-developed process for manufacturing steel plates that excel in low-temperature toughness.  
 2. Approval of FCA (Fatigue Crack Arrestor) steel plates by classification societies is under consideration. See page 38 for the outline.

## 2. High Tensile Strength Steel Plates

Society	Corresponding Grade	Authorized Steel Grade
Japan Welding Engineering Society (WES)	HW355	SUMITEN 540
	HW450	SUMITEN 590
	HW450 LT450-V-45G-15A	SUMITEN 590W
	HW450B, HW450CF LT450-IV-40G-15A	SUMITEN 590F
	HW490	SUMITEN 610
	HW490 LT490-V-40G-15A	SUMITEN 610W
	HW490B, HW490CF LT490-IV-40G-15A	SUMITEN 610F
	HW550	SUMITEN 690
	HW685	SUMITEN 780
	HW685	SUMITEN 780S
	HW885	SUMITEN 950

Ship Register	Corresponding Grade	Authorized Steel Grade
Nippon Kaiji Kyokai (NK)	KHT 60	SUMITEN 590
	KHT 62	SUMITEN 610
	KHT 72	SUMITEN 690
	KHT 72N	SUMITEN 730S
	KHT 80	SUMITEN 780
	KHT 80N	SUMITEN 780S
American Bureau of Shipping (AB)	—	SUMITEN 590
	—	SUMITEN 610
	—	SUMITEN 690
	—	SUMITEN 780
Russian Classification Society (RS)	—	SUMITEN 590
	—	SUMITEN 610
	—	SUMITEN 780
	—	SUMITEN 780S

## 3. Steel Plates for Low-Temperature Service

Society	Corresponding Grade	Authorized Steel Grade
Japan Welding Engineering Society (WES)	LT285-III-80G-30A	SLT285
	LT325-II-70G-30A LT325-IV-50G-25A	SLT325A
	LT325-III-90G-50A LT325-IV-80G-40A LT325-VI-70G-30A	SLT325B
	LT360-II-90G-40A LT360-IV-90G-40A	SLT360
	LT285-II-90G-60A LT285-VI-90G-50A	SLT2N255
	LT285-IV-90G-60A LT285-VI-90G-50A	SLT3N255 SLT3N275
	LT440-VI-105G-80A	SLT3N440
	LT520-III-196G-196A	SLT9N520
	LT590-VI-196G-196A	SLT9N590
	LT450-I-80G-60A LT450-II-80G-50A LT450-III-70G-40A LT450-V-60G-20A	SUMITEN 590LT
	LT490-I-80G-60A LT490-II-80G-50A LT490-III-70G-40A LT490-V-50G-20A	SUMITEN 610LT

Ship Register	Authorized Steel Grade	Remarks
Nippon Kaiji Kyokai (NK)	KL24A, B	Steel manufactured by SSC and DAC process- es is also approved.
	KL27	
	KL33	
	KL37	
	KL9M60	
American Bureau of Shipping (AB)	V-039	—
	V-051	
	V-060	
	VH-039	
	VH-051	
	VH-060	
Lloyd's Register of Shipping (LR)	9%Ni QT	—
	LT-AH	Steel manufactured by SSC and DAC process- es is also approved.
	LT-DH	
	LT-EH	
LT-FH		
Det Norske Veritas (NV)	NV2-3	Steel manufactured by CR, SSC and DAC processes is also approved.
	NV2-4	
	NV4-3	
	NV4-4	
	NV2-4L NV4-4L	

## 2. High Tensile Strength Steel Plates

Society	Corresponding Grade	Authorized Steel Grade
Japan Welding Engineering Society (WES)	HW355	SUMITEN 540
	HW450	SUMITEN 590
	HW450 LT450-V-45G-15A	SUMITEN 590W
	HW450B, HW450CF LT450-IV-40G-15A	SUMITEN 590F
	HW490	SUMITEN 610
	HW490 LT490-V-40G-15A	SUMITEN 610W
	HW490B, HW490CF LT490-IV-40G-15A	SUMITEN 610F
	HW550	SUMITEN 690
	HW685	SUMITEN 780
	HW685	SUMITEN 780S
	HW885	SUMITEN 950

Ship Register	Corresponding Grade	Authorized Steel Grade
Nippon Kaiji Kyokai (NK)	KHT 60	SUMITEN 590
	KHT 62	SUMITEN 610
	KHT 72	SUMITEN 690
	KHT 72N	SUMITEN 730S
	KHT 80	SUMITEN 780
	KHT 80N	SUMITEN 780S
American Bureau of Shipping (AB)	---	SUMITEN 590
	---	SUMITEN 610
	---	SUMITEN 690
	---	SUMITEN 780
Russian Classification Society (RS)	---	SUMITEN 590
	---	SUMITEN 610
	---	SUMITEN 780
	---	SUMITEN 780S

## 3. Steel Plates for Low-Temperature Service

Society	Corresponding Grade	Authorized Steel Grade
Japan Welding Engineering Society (WES)	LT285-III-80G-30A	SLT285
	LT325-II-70G-30A LT325-IV-50G-25A	SLT325A
	LT325-III-90G-50A LT325-IV-80G-40A LT325-VI-70G-30A	SLT325B
	LT360-II-90G-40A LT360-IV-90G-40A	SLT360
	LT285-II-90G-60A LT285-VI-90G-50A	SLT2N255
	LT285-IV-90G-60A LT285-VI-90G-50A	SLT3N255 SLT3N275
	LT440-VI-105G-80A	SLT3N440
	LT520-III-196G-196A LT590-VI-196G-196A	SLT9N520 SLT9N590
	LT450-I-80G-60A LT450-II-80G-50A LT450-III-70G-40A LT450-V-60G-20A	SUMITEN 590LT
	LT490-I-80G-60A LT490-II-80G-50A LT490-III-70G-40A LT490-V-50G-20A	SUMITEN 610LT

Ship Register	Authorized Steel Grade	Remarks			
Nippon Kaiji Kyokai (NK)	KL24A, B KL27 KL33 KL37 KL9M60	Steel manufactured by SSC and DAC processes is also approved.			
	American Bureau of Shipping (AB)	V-039 V-051 V-060 VH-039 VH-051 VH-060 9%Ni QT	---		
		Lloyd's Register of Shipping (LR)	LT-AH LT-DH LT-EH LT-FH	Steel manufactured by SSC and DAC processes is also approved.	
			Det Norske Veritas (NV)	NV2-3 NV2-4 NV4-3 NV4-4 NV2-4L NV4-4L	Steel manufactured by CR, SSC and DAC processes is also approved.