

Ship Class Steel Plate

Because of the bad working environment, hull to corrosion by seawater chemical corrosion, electrochemical corrosion and marine organisms and microorganisms; hull under high wave and alternating load; the ship shape processing method of complex factors such as, so the steel hull structure strict requirements. First of all, good toughness is the most critical requirement. Besides, it requires high strength, good corrosion resistance, welding performance, processing performance and surface quality. In order to ensure quality and ensure enough toughness, the chemical composition of Mn/C is above 2.5, and the carbon equivalent is also strictly required, and it is produced by a steel factory approved by the ship inspection department. The strength grade of the [structural steel](#) used in the hull is divided into the general strength structural steel and the high strength structural steel according to the minimum yield point. Hull structural steel is divided into two kinds: general strength and high strength steel. The general strength steel is divided into four grades according to the quality: A, B, D and E. The high-strength steel is divided into two strength grades and three quality grades; AH32, DH32, EH32, AH36, DH36 and EH36.



The standard strength steel of China Classification Society is divided into four quality grades: A, B, C and D, namely, CCSA, CCSB, CCSC and CCSD. The high strength structural steel regulated

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by China Classification Society is three strength grade and four quality grade.

Classification according to the classification society, there are ABS, LR, GL, DNV, BV, NK, KR, RINA, CCS, etc.

The American Bureau of American Bureau of shipping (ABS, full name: American Bureau of Shipping) was founded in 1862, is a non-governmental organization, mainly dedicated to the public interest and the needs of customers, through the standard construction and operation design, development and validation of ocean related facilities, protection of life and property and environmental safety. The prominent feature of the ABS is to carry out the inspection of the US Navy's small and medium combat warships and military auxiliary ships.

So far, ABS's business scope to ships, marine engineering, boiler and pressure vessel, petroleum and chemical industry, power plant facilities, railway and port facilities, ship equipment and container inspection business, at the same time, also carried out around 14000, 18000, ISO9000 certification, SA8000, BSCI etc.. According to the ABS, the 2009 entry level ship was innovating high, reaching a total of 159 million 500 thousand tons. Robert D Sommerville, chairman and chief executive of the American classification society, described 2009 as the "very strong year of the growth of the entry level ships" by the American classification society. The first quarter of 2010 the United States CCS class ships continued strong growth, by the end of March reached a total of 162 million tons. In 2009 - during the recent great depression of the shipbuilding market, the U. S. ship class entry level ships exceeded 10 million tons, only 5% over the same period.

ABS Shanghai, Dalian, Guangzhou three big station, the other station belonging to three station management. ABS China's sites are all managed by Hongkong, with the Yokohama head office and the ABS Asia Pacific headquarters in Singapore.

ABS certification is a certificate issued by the ABS.

The British Lloyd (Lloyd 's Register of Shipping LR), also translated as Britain's Lloyd society is

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a society, the world's oldest, the large and long history in the world shipbuilding industry renowned, ship industry certification authority is internationally recognized, also has a good reputation in the industry, other aspects of the project.

It is mainly engaged in the formulation and publication of ship standards, the inspection of ships, the verification of ship energy, and the publication of shipbuilding rules. There are offices or surveyors in ports in many countries. It has been involved in the amendment of the ISO9000 standard and the amendment of the accreditation regulations. There are more than 30 representative offices all over the world, recruiting auditors and accreditation work in the local area.

It is controlled by a committee. It consists of representatives from shipowners, ships and machine manufacturers, steelmakers, insurers, London Insurance Association and shipowners' Association, as well as the technical committee of the Royal ship design and Construction Association.

Germanischer Lloyd (GL) was founded in 1867, is one of the world's largest and oldest society, is the world's leading all kinds of container ship classification society, more than 30% of global container fleet and almost half of the container by Germanischer Lloyd certification. The German Lloyd has more than 400 offices in more than 120 countries in the world, with more than 2000 employees. The German Lloyd since 1875, from the German prime minister to the Ministry of foreign affairs and the Ministry of transport, has been actively supporting the GL business, and the federal government as a special technology organization and attention.

Norway DET NORSKE VERITAS was founded in 1864. Its headquarters is located in Oslo, Norway capital. It is a leading professional risk management agency in the world, aiming at safeguarding life and property safety and protecting the environment. DNV provides all kinds of risk management and comprehensive evaluation and certification services for customers, mainly related to the classification of service, certification services, technical services, set up

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about 300 branches in 100 countries worldwide, more than 9000 employees worldwide, from 85 different countries and regions.

Veritas (Bureau Veritas, Bureau Veritas, Veritas group, France International Shipping Association), Bureau Veritas, referred to as BV, was founded in 1828, headquartered in Paris, is one of the International Association of classification societies 12 formal members, one of the world's leading certification inspection group.

Standard: CCS, ABS, LR, GL, BV, DNV, KR, RINA, ETC
Grade :A, B, D, E, AH36, DH36, EH36, AH40, DH40, EH40, FH36, FH40
Thickness : 8mm-500mm
Width : 1000mm-4000mm
Length : 1000mm-20000mm
MOQ: 1 PC
Product type : Steel plate
Delivery time : Promptly (Stock) or 10-40 days (Production)
Stock : Available
MTC: Available
Delivery condition: AS REQUIREMENTS

Grade	C max	Si max	Mn	P max	S max	Als min
A	0.21	0.50	≥ 2.5C	0.035	0.035	-
B	0.21	0.35	0.80-1.20	0.035	0.035	-
D	0.21	0.35	0.60-1.20	0.035	0.035	0.015
E	0.18	0.35	0.70-1.20	0.035	0.035	0.015

Grade	C max	Si max	Mn	P max	S max	Als min
AH32	0.18	0.5	0.90-1.60	0.035	0.035	0.015
AH36	0.18	0.5	0.90-1.60	0.035	0.035	0.015
AH40	0.18	0.5	0.90-1.60	0.035	0.035	0.015
DH32	0.18	0.5	0.90-1.60	0.035	0.035	0.015
DH36	0.18	0.5	0.90-1.60	0.035	0.035	0.015
DH40	0.18	0.5	0.90-1.60	0.035	0.035	0.015
EH32	0.18	0.5	0.90-1.60	0.035	0.035	0.015
EH36	0.18	0.5	0.90-1.60	0.035	0.035	0.015
EH40	0.18	0.5	0.90-1.60	0.035	0.035	0.015
FH32	0.16	0.5	0.90-1.60	0.025	0.025	0.015
FH36	0.16	0.5	0.90-1.60	0.025	0.025	0.015
FH40	0.16	0.5	0.90-1.60	0.025	0.025	0.015
Grade	Rm (MPa)	Re(MPa) min	A% min	Akv/J min	E,T °C	Thickness (mm)
						≤ 50
						L C
AH32	440-570	315	22	0	31	22
AH36	490-630	355	21	0	34	24
AH40	510-660	390	20	0	41	27
DH32	440-570	315	22	-20	31	22
DH36	490-630	355	21	-20	34	24
DH40	510-660	390	20	0	41	27
EH32	440-570	315	22	-40	31	22
EH36	490-630	355	21	-40	34	24
EH40	510-660	390	20	-20	41	27
FH32	440-570	315	22	-60	31	22
FH36	490-630	355	21	-60	34	24
FH40	510-660	390	20	-40	41	27

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Grade	Rm	Re(MPa) min	A% min	Akv/J min		
	(MPa)			E.T °C	Thickness (mm)	
					≤ 50	
					L	C
A	400-520	235	22	20	-	-
B	400-520	235	22	0	27	20
D	400-520	235	22	-20	27	20
E	400-520	235	22	-40	27	20