



5000系、6000系铝合金产品 Sheet and Extrusion

铝合金的比强度大,耐蚀性好,具有较高的可焊性,在船舶的轻量化应用领域中越来越被重视。本册主要介绍用于船舶行业所需的5000系、6000系铝合金板材及型材,我公司可提供DNV.GL、ABS、BV、CCS、LR证书或其他质量认证。

Aluminium alloy draws more attention in ship lightweight application with high specific strength, good corrosion resistance and weldability. This catalogue mainly introduces the 5000/6000 series sheet/plate and profiles used for marine industry. Our company can offer DNV.GL, ABS, BV, CCS, LR or other quality system certified material.



化学成分 Chemical Composition

(wt%)

合金 Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Zr	参考标准 Standard
5083	≤0.4	≤0.4	≤0.1	0.40~1.00	4.00~4.90	0.05~0.25	≤0.25	≤0.15	—	EN573 ASTM B928
5086	≤0.4	≤0.5	≤0.1	0.20~0.70	3.50~4.50	0.05~0.25	≤0.25	≤0.15	—	
5456	≤0.25	≤0.4	≤0.1	0.50~1.00	4.70~5.50	0.05~0.20	≤0.25	≤0.2	—	
6063	0.20~0.60	≤0.35	≤0.1	≤0.1	0.45~0.90	≤0.1	≤0.1	≤0.1	—	
6061	0.40~0.80	≤0.7	0.15~0.40	≤0.15	0.80~1.20	0.04~0.35	≤0.25	≤0.15	—	
6082	0.70~1.30	≤0.5	≤0.1	0.40~1.00	0.60~1.20	≤0.25	≤0.2	≤0.1	—	

- 可根据客户的特殊要求提供个性化研发
provides one-stop R&D solution based on special requirements.



规格参数 Specification

板材 Sheet/plate

合金 Alloy	状态 Temper	厚度(mm) Thickness	宽度(mm) Width
5083	O/H111/H112/ H116/H321	3~10	≤2600
5086			
5456			
5083	O/H111/H112/ H116/H321	10~50	≤3600
5086			
5456			

型材 Profile

合金 Alloy	状态 Temper	厚度(mm) Thickness	宽度(mm) Width
6063	T5/T6	≤60	≤700
6061			
6082			
5083	O/H111/H112	≤40	≤700



力学性能 Mechanical Properties

板材 Sheet/plate

合金 Alloy	状态 Temper	抗拉强度 Rm(Mpa) Tensile Strength	屈服强度 Rp0.2(MPa) Yield Strength	延伸率 A(%) Elongation	剥落腐蚀 Exfoliation corrosion	晶间腐蚀 mg/cm ² Intergranular corrosion	认证情况 Certification status	参考标准 Standard
5083	O/H111/H112	≥275	≥125	≥16	—	—	DNV.GL ABS CCS BV LR	EN485 ASTM B928
	H116	≥305	≥215	≥10	≤PB	≤15		
	H321	305-385	215-295	≥12				
5086	O/H111	240-305	≥95	≥16	—	—	DNV.GL ABS CCS LR	
	H112	≥250	≥125	≥8	—	—		
	H116	≥275	≥195	≥10	≤PB	≤15		
5456	O/H111	285-360	125-205	≥16	—	—	CCS	
	H112	≥290	≥130	≥12	—	—		
	H116/H321	315-405	230-315	≥12	≤PB	≤15		

型材 Profile

合金 Alloy	状态 Temper	抗拉强度 Rm(Mpa) Tensile Strength	屈服强度 Rp0.2(MPa) Yield Strength	延伸率 A(%) Elongation	剥落腐蚀 Exfoliation corrosion	晶间腐蚀 mg/cm ² Intergranular corrosion	认证情况 Certification status	参考标准 Standard
5083	O/H112	270-350	≥110	≥14	—	—	ABS	EN573
	H111	≥275	≥165	≥12	—	—		
6063	T5	≥150	≥110	≥8	—	—	DNV.GL	
	T6	≥205	≥170	≥10	—	—		
6061	T6/T5	≥260	≥240	≥10	—	—	DNV.GL CCS/BV	
6082	T6/T5(≤5mm)	≥290	≥250	≥6	—	—	DNV.GL/ABS CCS/BV	
	T6/T5(>5mm)	≥310	≥260	≥10	—	—		

●备注:所有合金均可扩项
All alloys can be certified



典型应用 Typical Applications



● 海岸执法船 Coastal law enforcement vessel



● 气垫船LSAC Hovercraft



● 双体渡船 Catamaran ferry



● 高速快艇 High speed yacht



● 海洋工程装备 Ocean engineering equipment



● LNG船舶 LNG Vessel