

各國天車標準等級比較表(結構部份)
Worldwide Crane Standard Comparison List (Structure)

鋼結構 Steel Structure

主要標準 Main Standards	ISO 4301	FEM / I-1970	SFS-ISO 4301 SFS-4020	DIN 15018	IKH 4.30.01	BS 466.1984 BS 2573 : Part 1 1983	CHAA 70/1983
天車類 Crane Group	A1 A2 A3 A4 A5 A6 A7 A8	1 2 3 4 5 6	FEM	H1 H2 H3 H4 H : Hoist Class B : Crane Group	B1 B2 B3 B4 B5 B6 DIN	ISO	A B C D E F
吊車系數 Hoist Factor		1.15 ... 1.6 Depending on - Hoist Speed - Crane Type	FEM	1.1 ... 2.2 Depending on - Hoist Speed - Hoist Class	DIN	1.1 ... 1.5 (..2) Depending on - Crane Type	1.15 ... 1.50 Depending on - Hoist speed
縱行系數 Traveling Factor		1	FEM	1.0 , 1.1 or 1.2 Depending on Travel Speed	DIN	1	1.1 or 1.2 Depending on Travel Speed
風壓 Wind Pressure N/m ²	250	250	250	250	250	250	240
壓縮應力系數 Para. Comparison Stress Loading Case I II III	0.667 σ_y 0.75 σ_y 0.825 σ_y	FEM	DIN	Different Calculating Method	0.60 σ_y 0.66 σ_y 0.75 σ_y		
尺寸規格 Dimensioning Rules		No Rules	No Rules Design Practice	No Rules		R/L \geq 1/7	L/H \leq 25 L/H \leq 65
撓度(Y/L) Deflection (Y/L) (Load Trolley)		No Rules	No Rules Design Practice - 0.1 ... 0.2 - Additionally Natural Freq.	No Rules	\leq 0.2	\leq 0.133	\leq 0.1125
疲勞尺寸 Fatigue Dimensioning		\cong DIN	FEM	Take Into Account (Crane Group. K . α)	DIN	Deviates from DIN (Crane Group k . α)	Deviates from DIN (Crane Group k . σ R)
變形因素 Buckling Etc. - 安全效益 - Safety Coeff. - 減少應力 - Reduced Stress - 計算公式 - Calculation Formula		\cong DIN	FEM	Safety Factor DIN 15018 Calculation DIN 4114	\cong DIN	Own Dimensioning Rules	\cong DIN Additionally Special Rules