

00. Merits of Steel Structures

Steel products possess the following essential properties required of construction materials.

- High toughness
- High workability
- Highly stable quality

■ Steel structures built employing these steel products offer the following features:

【High resistance to earthquakes and other disasters】

- Steel structures: Tenaciously resistant to seismic vibrations
- Multi-function public facilities with the basic purpose of disaster prevention: No damage even in earthquakes with a seismic intensity of 7
- CFT columns and vibration-damping steel products are effective in further enhancing seismic resistance

【Stable quality and shortened construction term due to industrial production】

- Stable supply due to plant manufacture
- Reduced on-site construction term
- Applicability in narrow work sites and on soft ground due to the light weight of steel structures

【Rich design performance】

- Lightweight design incorporating slender columns and beams
- High workability, ease of installing curvilinear and other structures
- Ease of combined use with other materials such as concrete, timber and glass

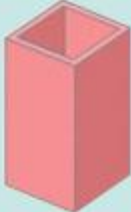

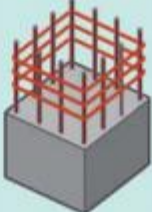

【High landscaping performance and flexible space construction】

- Large, column-free spaces
- Flexible response to future application changes, prolonged service life of structures

【Global environmentally friendly material】

- Recyclable, reduces construction wastes, and is a sustainable material
- Reuse by means of demolition and restructuring allows resources savings
- Mitigates environmental burdens due to improved durability

Comparison of Structural Types in Building Construction

Main structural type	Steel structure	Concrete-filled steel tube (CFT) structure	Reinforced-concrete (RC) structure	Wooden structure
Feature	<ul style="list-style-type: none"> • Large span, high freedom in space design; Easy response to future design change • Shorter construction term • Requirement for provision of fire-resistant and corrosion-protection measures 	<ul style="list-style-type: none"> • Improved strength and deformation capacity due to mutual restriction effect of steel tube and concrete 	<ul style="list-style-type: none"> • High rigidity and less vibration • High fire resistance • Heavy structural weight and longer construction term • Low resistance to tension and care to crack occurrence 	<ul style="list-style-type: none"> • Light weight and easy fabrication • Requirement for provision of fire-resistant measure • Limited space size
Structural outline				

Application Fields



ABENO HARUKAS



TOKYO SKYTREE®



Tokyo Gate Bridge



Weathering steel bridge

Contact

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