

CFTCOL

CFT COLUMN



Characteristics/Merits

As-is

- Roll H-shaped steel column
- Reduced structural capacity due to strength /stiffness to weak axis
- Torsion occurs when the casing is lifted
- Vertical error management (H/300)

H-shaped steel with studs

- Reducing constructability due to stud
- Increased amount of excavation (diameter/deep) with stud spacing and length

Strong axis

Weak axis

Underground columns

Excavation depth

Stud

6m

5m

Pile

1,200mm

To-be

- CFT column
- Steel weight: 40% less (construction cost 35%)
- No Strong/weak axis-Reduced drilling diameter by 25%
- Vertical error management (H/500) possible

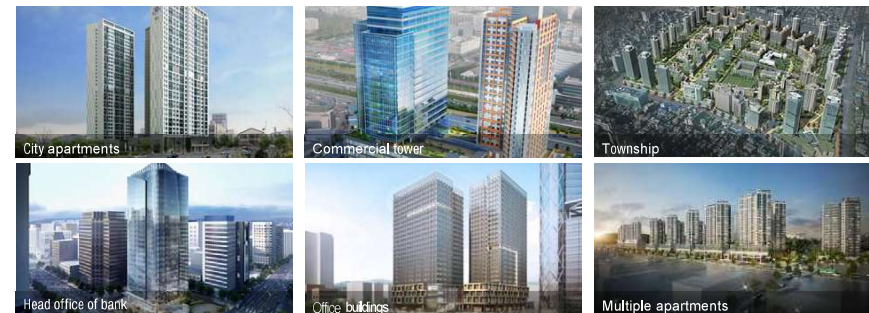
Steel tube with ringplate

- Steel weight: 20% reduction in construction cost by 15%
- excavation diameter: 30% reduction
- excavation depth: 15% reduction

Product specifications

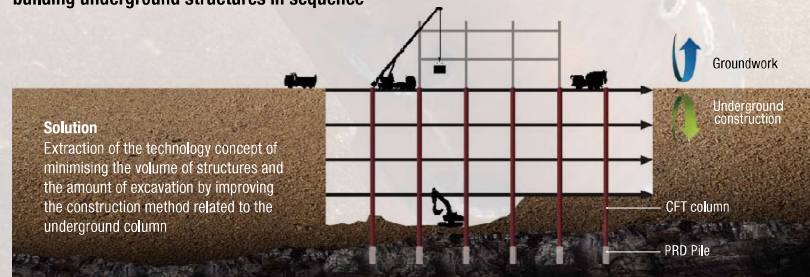
Type	Product method	materials	Diameter and Thickness (mm)	Notation	Standards
Structural Steel tube for building	Roll forming	Hot rolled Coil	21.7-1574.8	SNT 275A,E SNT 355A,E SNT 460A,E	D 3632
	Pressing/Roll bending	Plate	2-100		
Structural square Steel tube for building	Roll forming	Hot rolled Coil	200-500 / 6-14	G 295E / G 360E	D 3864
	Pressing/Roll bending	Plate	300-1000 / 9-40	G 275A / G 355A	
Steel tube for Pile	Roll forming/spiral	Hot rolled Coil	21.7-1016	G 275(SKK400) G 355(SKK490)	F 4602
	Pressing/Roll bending	Plate	2-22		

Applications



Technology

Top-Down Method Using High-Strength CFT Columns Prior to excavation work, the exterior wall of the basement and the column of the basement floor were constructed. Construction method for building underground structures in sequence



Construction process

