

Composite Column

F-PSRC

Form – Prefabricated Steel Reinforced Concrete



Characteristics and Advantages

As-is RC → To-be SRC

Excellence in Pouring workability → High quality & shorter construction period

Pouring hose is prone To-be interfered

RC

No interference

PSRC

Side pressure by steel webs

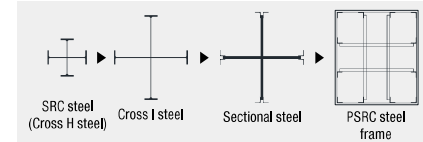
RC

No steel webs → Minimize interference

PSRC

Advantages	Advantages	Advantages over SRC
Share all the advantages of PRC	<ul style="list-style-type: none"> Ensure quality and reduce construction period by prefabricating all members Self-standing during construction 	<ul style="list-style-type: none"> Cut back more than 20% of construction cost
Distribution structural steel to the most outer part of column	<ul style="list-style-type: none"> Higher allowable load during construction compare to PRC Ease in securing consistency in thickness of covering concrete during form installation 	<ul style="list-style-type: none"> Higher flexural strength than SRC → Possible to reduce the volume and cross sectional area of steel frame
Apply L-shape angle to the edge of column section	<ul style="list-style-type: none"> Excellent self-standing and erection than PRC → ease in securing erection of mini column of which width of cross-section of less than 700mm Easy bolt connect to every joint Advantageous to apply modular design, where multiple number of mini columns are placed in parallel → effective for forming mega column 	
Secure enough room at the center of column section	<ul style="list-style-type: none"> Minimize the penetration of concrete hose by complementary hoop 	<ul style="list-style-type: none"> No web interference of structural steel during concrete pouring Minimize side pressure

Optimal distribution of steel member → Minimize steel member cost

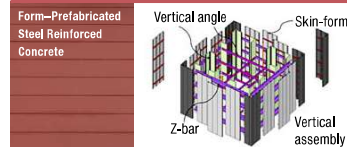


Economics

Comparing with RC & SRC structure, F-PSRC Column can reduce quantity of steel members about 30% and more. Also, it can reduce construction cost by reduction of construction period.

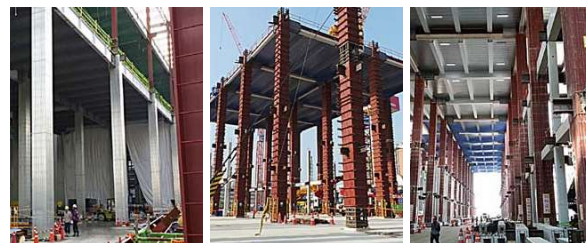
On Industrial side, F-PSRC can contribute to building industry and job creation. Also, it can contribute new material industrial by using high strength/performance material.

Product Specification / Standard



1. Rolled steels for general structure (D 3503): G275, G315, G410
2. Rolled steels for welded structures (D 3515): G355, G420, G460
3. Rolled steels for building structure (D 3861): G355
4. Hot-rolled mild steel plates, sheets and strip (D 3501): SPHC

Applications



Technology

Prefabricating the column structure by welding/bolting steel members
Eliminate field fabrication process

