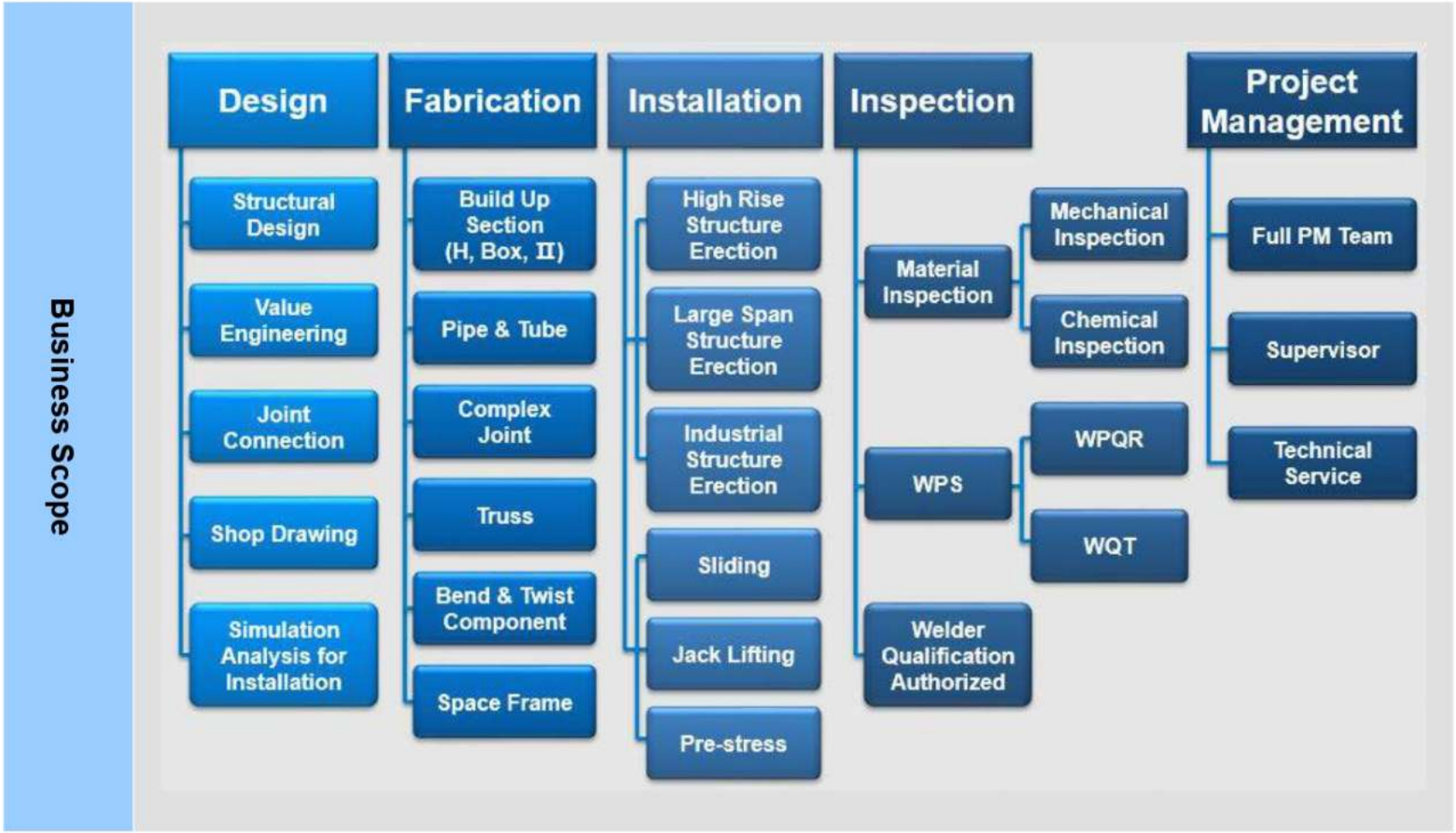
# Steel Structure performance (Buildings)

RKP

More info: rkpro.eu

## Business Scope



## 1. Fabrication Capacity

Fabrication Capacity

## 2. WORKSHOP

### 2.1 Workshop Introduction

## 2.2 Typical Equipment

### 2.2.1. Production Line

# Built up H - Section Steel Product Line

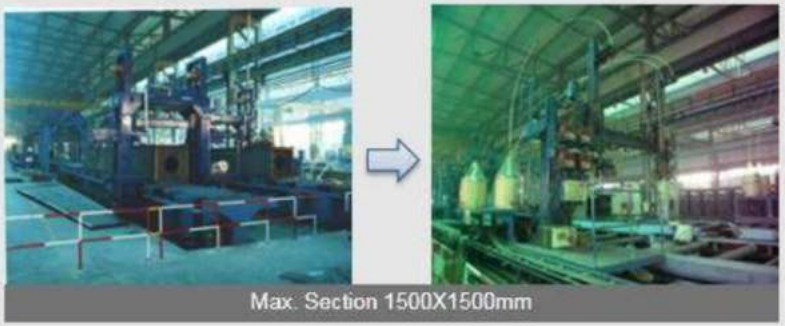
- Assembly
- Welding
- Straightening
- Sawing
- Drilling
- Cutting Weld Access Hole
- Blasting

Max. Web Width 1500mm; Max. Flange Width 800mm

Blasting machine
Max. size 25*1.8*2.2m

# Built up Box - Section Steel Product Line

- Assembly
- Backing Weld
- Welding
- Overturn
- Electro Slag Welding
- End Milling
- Blasting



Max. Section 1500X1500mm

Pipe Steel Product Line

Rolling

For Pipe: Min Diameter 1200mm; Max. length 4m

Intersection Line Cutting

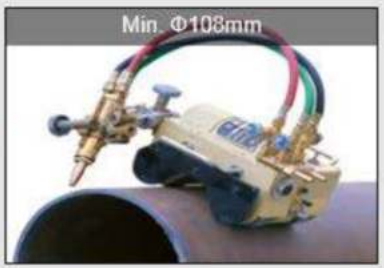
Diameter: Less Than Φ 1850mm

Diameter: Φ 50~800mm

Bending Pipe

Max. Φ 1500 × 50mm

Min. Φ108mm



Bevel Cutting

## Production Facility

Plasma cutting machine
( The maximum cutting factor：25m*4.2m*50mm )

Hot bending machines
(The maximum bending diameter：630mm)

Combined punching and shearing machine
(The maximum pressure:1100KN)

Total station
( 0.9 second range, non prism measurement range 500m )

## Production Facility

The technology is a combination of mechanical and computer science, which is used for bending and twisting steel plates. The machine has 81 adjustable points displayed in order to 3-D steel plate forming. Dimension of the finished product: 1350mm x 13000mm ; Thickness : 8mm-60mm.

Digital controlled hydraulic bending machine. It is used to bending the plate. The max dimension of the processed plate: width 12200mm;
bending depth 1500mm;

75 t indoor crane
(The maximum lifting height:18.5m)

100t bridge crane for pre-assembly in the 100m*30m site, the maximum lifting height:20m
100m*30m

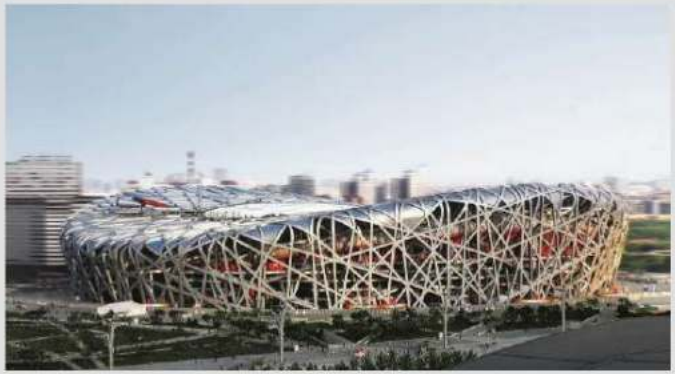
Packing site:100m*27m

## 2.2.2. Inspection Center

Parts of Inspection and Testing Facility

## 3. PROJECTS COLLECTION

Projects Collection



Large-span Steel Structure Projects

Industry Projects

High-rise Building Projects

# 3.1. Projects in Europ

| Project Name | Sines Power Plant, Portugal |
| --- | --- |
| Description | This project located in Portugal, constructed by ALSTOM.<br>The main type of structure is H-beam frame and the steel weight is 2,800t. **AISC** |
| Picture |  |

| Project Name | German Porsche Manufacturing Workshop |
| --- | --- |
| Description | The main structure of this project is welded h-beam, space lattice column, floor and truss, the second gate of double ridge two slope structure, made up by angle steel truss girder beam. Construction area is 42,812 ㎡, plane size is: length 278 m×154 m wide, the roof level is about 24 m. |
| Picture |  |

| Project Name | German STEINBIS Packaging Co., Ltd. Plant |
| --- | --- |
| Description | This project located in Germany, with total construction area of 6,000 ㎡. |
| Picture |  |
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# 3.2. Long-span Steel Structure Projects

| Project Name | National Stadium – “Bird’s Nest”, Beijing, China |
| --- | --- |
| Description | Steel weight: 51,500t. Bending and Twisting Member Structure. Maximum structure span is 323m×296m. All the structures are welding connect on site, welding weight is 2.5% of total steel weight. |
| Picture |       |

| Project Name | Lusail Stadium, Qatar |
| --- | --- |
| Description | Main Stadium for Qatar 2022 FIFA World Cup **BS EN, AESS**<br>Total steel weight: 20,200t; 92,044 spectators.<br>Shop drawing, fabrication and erection. |
| Picture |  |

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| **Picture** |  |  |  |
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| Project Name | Al Rayyan Stadium, Qatar |
|---|---|
| Description | The stadium of Qatar 2022 FIFA World Cup will host the quarter finals. **BS EN, AESS**<br>Pre-stressed truss structure; Total steel weight: 9,000t; 1250t crawler crane.<br>Shop drawing, fabrication and erection. |
| Picture |  |
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| Picture |           |

| Project Name | Baraki Stadium, Algiers, Algeria |
| --- | --- |
| Description | Total steel weight: 7,000t. **EN,CCTP**<br>Shop drawing, fabrication and erection. |
| Picture |  |

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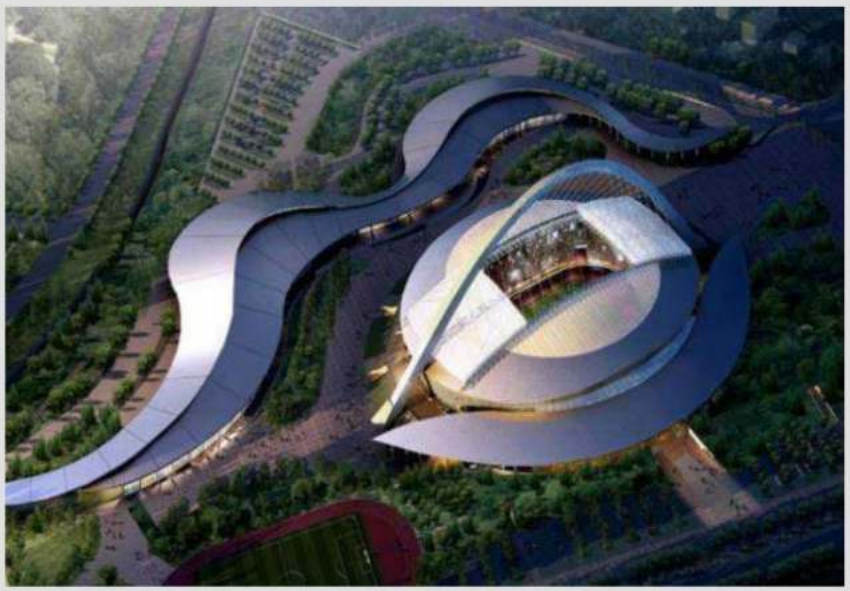
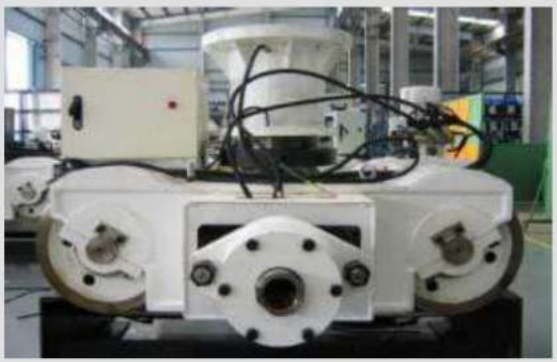
| Project Name | Te Kaha Stadium, Christchurch, New Zealand |
| --- | --- |
| **Description** | Total steel weight: 10,510t; 30,000 spectators. **AS/NZS**<br>Maximum structure span is 232m×195m.<br>Shop drawing, fabrication and erection. |
| **Picture** |  |

| Project Name | Shaoxing Stadium, Zhejiang , China |
|---|---|
| Description | Retractable roof stadium, 45,000 spectators. Total building area is 77,540 ㎡. Span 267m×206m. |
| Picture |      |

| Project Name | Nantong Stadium, Jiangsu, China |
| --- | --- |
| Description | Building Area: 68,565 ㎡;Total Steel Weight: 11800t. Retractable Roof Area: 17,000 ㎡; Max. span of arch truss is 262.5m.Value engineering, fabrication, erection, commission of machine, control system and steel structure. |
| Picture |      |

| Project Name | Ordos Stadium, Inner Mongolla, China |
| --- | --- |
| Description | Retractable Roof Area: 10,800 ㎡; Total Steel Weight: 11,000t; 35,107 Spectators; Max. Span of Arch: 335m。 Value engineering, fabrication, erection, commission of machine, control system and steel structure. |
| Picture |    |

| Project Name | Shenzhen Bay Sports Center, Guangdong,China |
| --- | --- |
| Description | Building Area: 250,000 ㎡; Total Steel weight: 13,500t; Thin-wall BTM section.<br>Shop drawing, fabrication and erection |
| Picture |      |

| Project Name | National Gymnasium, Beijing, China |
| --- | --- |
| Description | Two-dimension beam-string truss. Max. span 144m. Building area: 81,000 ㎡.<br>VE, shop drawing, fabrication and erection. |
| Picture |      |

| Project Name | Ice Hockey Hall, Astana, Kazakhstan |
| --- | --- |
| Description | Total steel weight is 4,350t. . **EN**<br>Structure design, Connection design, Shop drawing, Fabrication and erection. |
| Picture |      |

| Project Name | Ice Hockey Hall, Astana, Kazakhstan |
|---|---|
| Description | **Sliding & Jack Lifting**. . **EN**<br>Structure design, Connection design, Shop drawing, Fabrication and erection. |
| Picture |     |

| Project Name | Pavilion C3&C4, Astana Expo 2017, Kazakhstan |
|---|---|
| Description | Total steel weight is about 15,000t. **EN**<br>Structure design, Connection design, Shop drawing, fabrication and erection. |
| Picture |       |

| Project Name | Makkah Railway Station, Saudi Arabia |
| --- | --- |
| Description | Consist of 60 large tree-shaped structures and 360 small. **EN**<br>Steel weight: 15,300t. The web plate is bending and twisting member structure. All of the nodes are connected with End-Plate Bolts on site. Each unit of 27m *27m is trail-assembled as a whole in the workshop. |
| Picture |  |

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| Project Name | 31-33 Metro Station of Tuas West Extension, Singapore |
| --- | --- |
| Description | Total steel weight is about 2,350t. **EN**<br>Single layer shell by casting steel node connection. Shop drawing, fabrication and erection. |
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| Project Name | Hong Kong Passenger Clearance Building, HK-Zhuhai-Macao Bridge |
|---|---|
| Description | Total steel weight: 16,000t. The largest modular for sea transportation 60mx25mx17m, 880t shift to port by SPMT |
| Picture |        |

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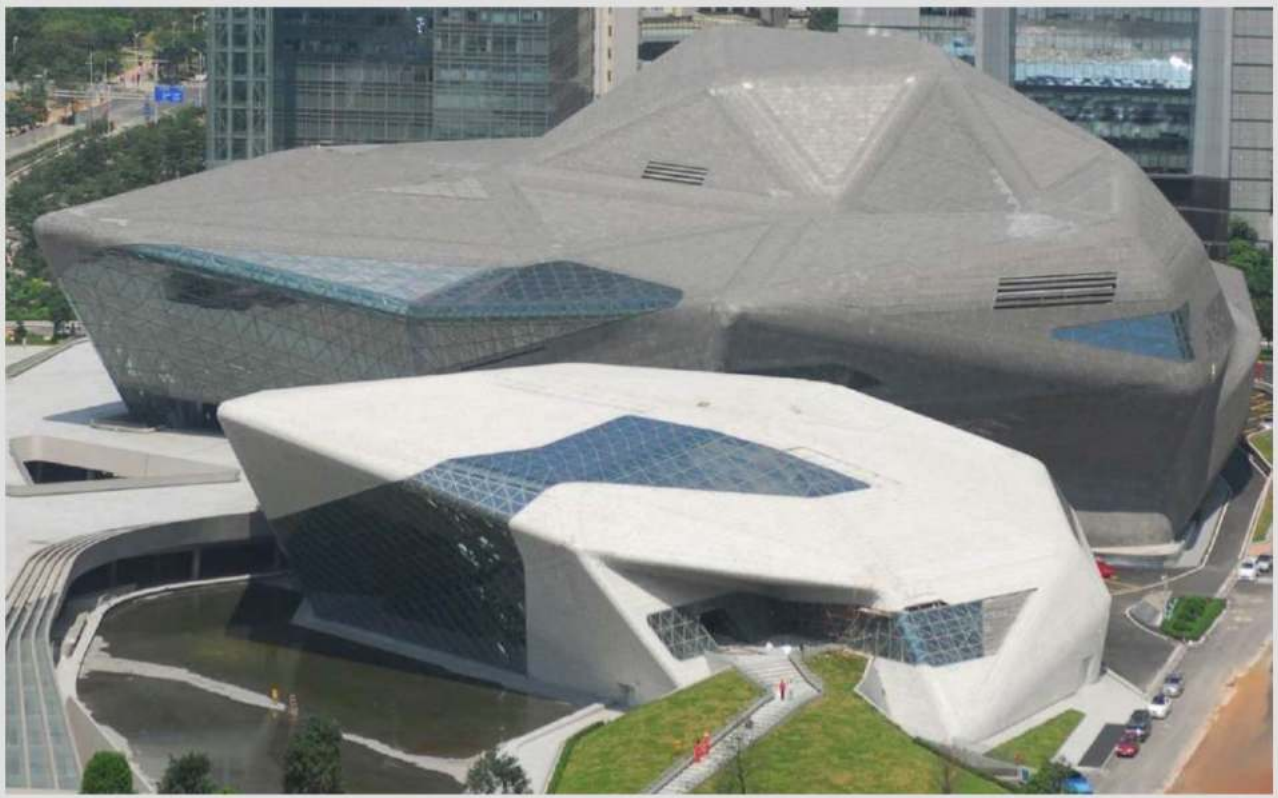
|---|---|
| **Picture** |       |

| Project Name | Guangdong New Museum, China |
| --- | --- |
| Description | Total steel weight is about 20,100t. The building area is 66,280 ㎡. Heavy truss, max plate thickness is 100mm, box section. Over 8800t structural steel sliding from beginning position 1 to finish position 2 in 35m high. |
| Picture |        |

| Project Name | Guangzhou Opera, Guangdong, China |
| --- | --- |
| Description | Total steel weight is about 12,000t. The building area is 70,000 ㎡.<br>Casting steel 3,000t, max weight per piece 50t. |
| Picture |  |

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| Picture |       |

| Project Name | National Digital Library, Beijing, China |
| --- | --- |
| Description | Jack lifting weight of structural steel over 10,000t. Total steel weight is about 14,000t.<br>The building area is 79,899 ㎡. Heavy truss, max plate thickness is 80mm, box section. |
| Picture |  |

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| **Picture** |         |

| Project Name | Chengdu Oceanarium, Sichuan, China |
| --- | --- |
| Description | Total steel weight is about 12,510t. The building area is 1,070,539 ㎡.<br>Value engineering, shop drawing, fabrication and erection. |
| Picture |  |
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| Project Name | King Abudulaziz International Airport, Jeddah, Saudi Arabia |
| --- | --- |
| Description | The largest international airport in Saudi Arabia. **AISC, ASTM, AESS**<br>Building area: 670,000 ㎡. Total steel weight: 27,000t.<br>Complex casting steel used in bottom of the column |
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| Project Name | Dhaka Hazrat Shahjalal International Airport, Bangladesh |
| --- | --- |
| Description | Building area: 300,000 ㎡.Total steel weight: 32,000t. **AISC, ASTM, AWS**<br>Life-cycle BIM management<br>Work scope: shop drawing, fabrication and erection. |
| Picture |  |

| Project Name | Noibai New International Airport, Hanoi, Vietnam |
|---|---|
| Description | The largest international airport in Vietnam. Hybrid structure and pre-stress-rod in trusses.<br>Cable strength inspected with EM method. Shop drawing, fabrication and erection. |
| Picture |     |

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| Project Name | Astana New International Airport, Kazakhstan |
| --- | --- |
| Description | Steel weight is 9,700t, under construction. **EN**<br>Connection design, shop drawing, fabrication and erection. |
| Picture |       |

| Project Name | Capital International Airport Terminal 3, Beijing, China |
| --- | --- |
| Description | One of the second biggest space frame building with area of 300,000 ㎡ in China. The building area is about 240,000 ㎡.Length of the steel structure reaches 2km. The total weight of steel is 8,500t. |
| Picture |  |

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| **Picture** |  |  |  |
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| Project Name | Beijing Daxing International Airport, China |
| --- | --- |
| Description | One of the biggest space frame building with area of 313,000 ㎡ in China. The building area is about 1,300,000 ㎡.Length of the steel structure reaches 2km. The total weight of steel is 52,000t. |
| Picture |  |

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| **Picture** |  |  |  |
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# 3.3. High-rise Building Projects

| Project Name | Kingdom Tower, Jeddah, Saudi Arabia |
|---|---|
| Description | It is 1,007m high with251storeys. The highest tower in the world - under construction<br>Maximum plate thickness is 180mm with full penetration weld. **AISC, AWS** |
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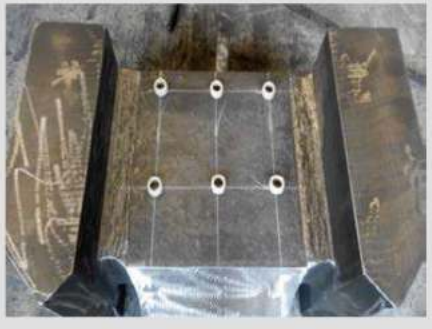
| |  |  |  |

| Project Name | Seascape Tower, Auckland , New Zealand |
| --- | --- |
| Description | The highest building in Auckland, it is 208m high with 53storeys. **AS/NZS, AESS, C5M**<br>Total steel weight is 10,800t. Shop drawing, fabrication and erection. |
| Picture |    |

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| Picture |  |  |  |  | |
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| Project Name | Guangzhou New TV Tower, Guangdong, China |
| --- | --- |
| Description | It is 610m high; the steel weight is about 40,000t. The peripheral is oblique grid.<br>Max CHS: 1850×60mm. Monthly delivery: 3,050t. |
| Picture |      |

| Project Name | Seascape Tower, Auckland , New Zealand |
|---|---|
| Description | The highest building in Auckland, it is 208m high with 53storeys. **AS/NZS, AESS, C5M**<br>Total steel weight is 10,800t. Shop drawing, fabrication and erection. |
| Picture |    |

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| **Picture** |  |  |  |  | |
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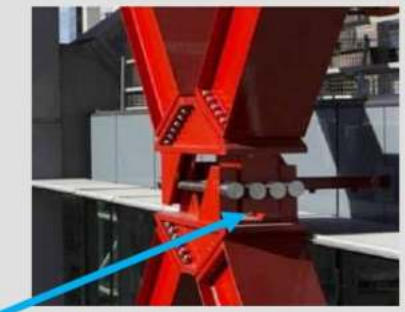
| Project Name | 8 Chifley Square, Sydney, Australia |
|---|---|
| Description | 6 Star -"Green Star" Building, total steel weight is about 1,272t. **AS, AESS**<br>Diagonal bracing joint at side, bearing shear at one direction and no compression |
| Picture |      |

| Project Name | 200 George Building, Sydney, Australia |
| --- | --- |
| Description | The same client of 8 Chifley Square Building. Architectural exposed X shape columns.<br>Hollow and twisting section; 3.8m high oversized for inland transportation. |
| Picture |      |

| Project Name | Technology Park, Sydney, Australia |
| --- | --- |
| Description | Total steel weight: 8,700t. **AS/NZS, AESS**<br>Shop drawing, material purchase, fabrication and CIF to Sydney. |
| Picture |  |

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| **Picture** |  |  |  |
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| Project Name | Guangzhou Chow Tai Fook Center (East Tower), Guangdong, China |
|---|---|
| Description | It is 530m high with 111storeys. Total steel weight is about 96,000t.<br>8 huge columns, section ups to 3.5m*5.6m |
| Picture |    |

| Project Name | Shanghai World Finance Center, China |
| --- | --- |
| Description | It is 492m high with 101storeys. Total steel weight is about 65,000t. Monthly delivery: 4,000t. |
| Picture |      |

| Project Name | Tokyo Cocoon Tower, Japan |
|---|---|
| Description | One of the 2008 world top ten architectures. Designed by KENZO TANGE firm and constructed by SHIMIZU Corporation. The steel structure is complex with the steel weight of 3,500t. **JIS** |
| Picture |      |

| Project Name | Huzhou Sheraton Hotel, Zhejiang, China |
| --- | --- |
| Description | It is 100m high, ring structural with 22storeys, width 116m.<br>Building area is about 65,000 ㎡. |
| Picture |     |

| Project Name | Storage Research Building, Guangzhou Xingye International, Guangdong, China |
|---|---|
| Description | This project looks like a jade. The outer diameter is 146.6m; inner diameter is 47m.<br>It is 138m high with 30storeys. Building area is 106,491 ㎡. Total steel weight is about 10,000t. |
| Picture |     |

| Project Name | Hangzhou International Conference Center, Zhejiang, China |
| --- | --- |
| Description | The largest spherical structural steel in China. It is 85m high with 19storeys.<br>Total steel weight is about 13,000t. Building area is 130,096 ㎡. |
| Picture |       |

| Project Name | Chengdu Icon Cloud Tower, Sichuan, China |
| --- | --- |
| Description | It is 190m high with 46storeys on ground and 2storeys underground.<br>Total steel weight is about 15,000t. |
| Picture |  |

| Project Name | Shenzhen Stock Exchange Operation Center, Guangdong, China |
|---|---|
| Description | It is 245m high with 74storeys. Total steel weight is about 28,000t. Shop drawing, fabrication and erection |
| Picture |     |

| Project Name | Hangzhou Raffles Plaza, Zhejiang, China |
| --- | --- |
| Description | Building area is 400,000 ㎡. The height of Raffles City is around 250m with 60storeys above ground. Twist buildings with curved shape structure. |
| Picture |    |

| Project Name | Greenland Center Tower A, Xi'an city, China |
|---|---|
| Description | It is 276m high with 57storeys above ground and 3storeys underground.<br>Total steel weight is 22,740t. Building area is about 170,000 ㎡. |
| Picture |   |

# 3.4. Industry Projects

| Project Name | Urea Fertilizer Nitrogen Plant III, Mato Grosso do Sul, Brazil |
|---|---|
| Description | It will be the biggest nitrogen fertilizer plant in the world. **AISC, ASTM**<br>Total steel weight is about 25,000t. All bolted connection and part of trial assembly in workshop.<br>Connection design, fabrication and technical service on site. |
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| **Picture** |  |  |  |
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| Project Name | Vik Winery Plant, Chile |
| --- | --- |
| Description | One of the Top 10 Chile winery and the structure of roofing is made up space truss and membrane structure. |
| Picture |      |

| Project Name | Chery Automotive Plant, Sao Paulo, Brazil |
| --- | --- |
| Description | The building area is 56,000 ㎡. Total steel weight is about 3,200t.<br>Shop drawing, and fabrication. |
| Picture |    |

| Project Name | Thailand Simlais OCTG Manufacture Company, Thailand | |
|---|---|---|
| Description | The building area is 61,460 ㎡. New products HV-310 longitudinal profiled wave board is adopted in the facade system. The eaves turn out to be circular arc, which differs from the traditional practice. | |
| Picture |  |  <br>Cold-drawing Workshop<br><br>  <br>Hot-rolled Workshop |

| Project Name | Taipa New Passenger Ferry Port, Macao, China |
|---|---|
| Description | The building area is 58,000 ㎡, and the steel weight is 4,800t.<br>The structure is reinforced concrete frame structure, and roofing system is plane truss structure. |
| Picture |       |

| Project Name | AMB Sagami Crawler Crane Factory, Japan |
|---|---|
| Description | The steel weight is about 2,600t. **JIS**<br>The project was designed by KUME SEKKEI firm and constructed by Taisei Corporation.<br>The time for the project is very limited is about 80days, main structures are cross columns.<br>The earthquake is very frequent in Japan, so the demanded of the structure quality and precision is high. |
| Picture |       |

| Project Name | Cotton Spinning Mill, Thailand |
| --- | --- |
| Description | The building area is 45,000 ㎡.<br>Enclosure system: Roofing: HV-470, Walling: HV-248.<br>Shop drawing and fabrication. |
| Picture |  |

| Project Name | Redeemed Christian Church of God, Lagos, Nigeria |
| --- | --- |
| Description | The structure is made up of spatial truss structure and gantry light steel structure.<br>It is covers area of 480,000 ㎡, and the steel weight is 14,261t. |
| Picture |     |

| Project Name | West Africa Benin Lokossa Cotton Mill (C.B.T), Benin |
| --- | --- |
| Description | International support project by China department of textile. The construction area is 21,768 ㎡,the structure is single ridged double slope with four multi-span light steel structure. |
| Picture |  <br>  |