



**SOANSENG:
STRUCTURAL STEEL
ENGINEERING COMPANY**

2021 Corporate Presentation

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Soanseng

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Services and Products

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Case Studies

”

Soanseng is our family business, we have been designing, producing and erecting steel structures for over 30 years. We have built expertise in industrial infrastructures by developing innovative solutions.

Consistent with our success, we have built an international presence in Foshan, Paris, Douala and Lagos that enables to satisfy our clients in these regions. Up to now, we have built infrastructures in more than 10 countries; mostly in Asia and Subsaharan Africa.

“



Deqi Su
Founder & Chairman



SOANSENG

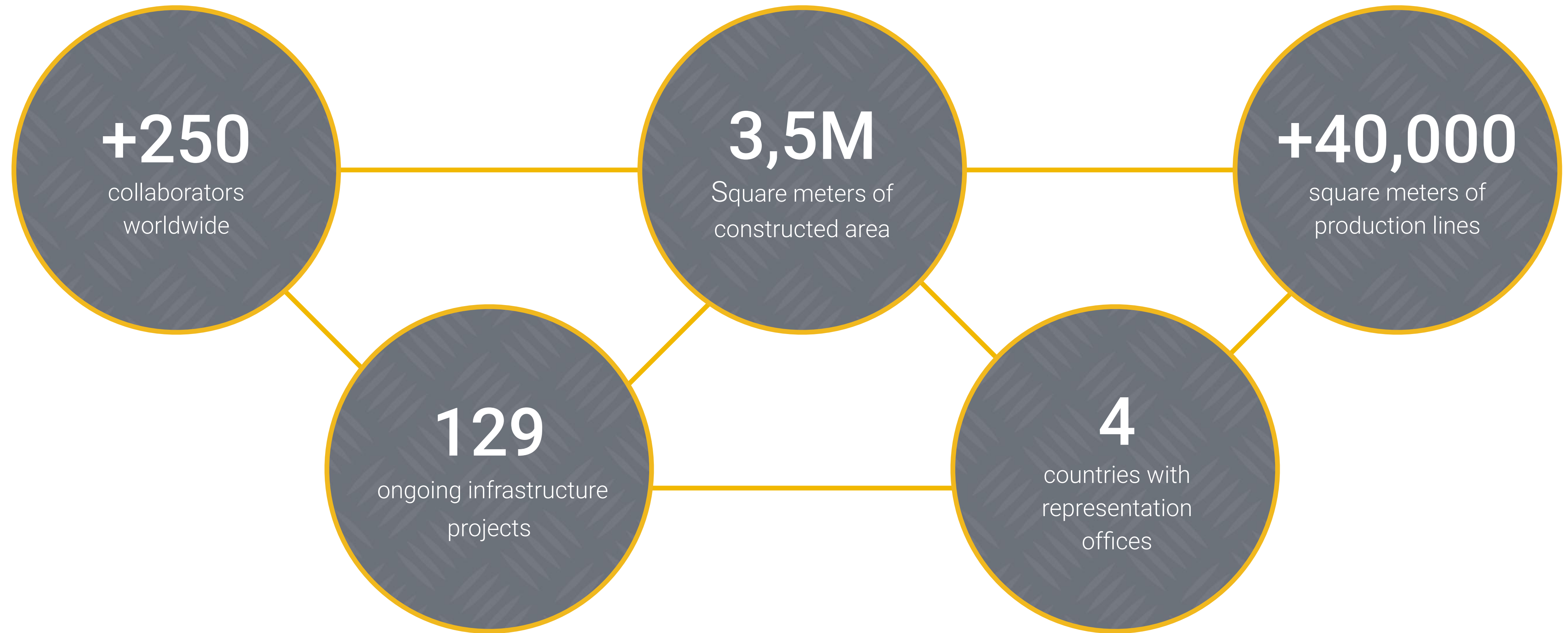
Steel engineering company

Located in the south of China, Soanseng is a leading manufacturer and constructor of metal building for the industrial sector. Soanseng steel structures are reliable, cost-efficient and quick to assemble.

Soanseng scalable solution fits all industrial needs: factory, warehouse, distribution center, storage facility and exhibition hall.



Key Figures



At a Glance

1988

Mr Su engages into the **steel construction** business in the city of Foshan.

2005

Establishment of a secondary steelwork production facility in Foshan: 5000m²

2008

Acquisition of structural steelwork production facility in Foshan: 16000m²

2013

First project in **Angola** (400+ tons)

2017

Completion of the **civil engineering project**: the 80m long Foshan East Train Station Steel bridge

2019

Establishment of a light & heavy steel production facility in Wuzhou: 50000m²

2021

Opening of Soanseng Engineering office in **Paris**

Board Members



Deqi

Founder and Chairman



Dekuo

Co-founder and COO



Bryan

CEO



Jean-Pablo

VP and Chief International Officer



David

Chief Technology Officer



Sylvia

Chief Financial Officer



Nathan

Chief Quality Officer



Isabelle

Chief Human Resources Officer



Louis

Head of BIM



Lina

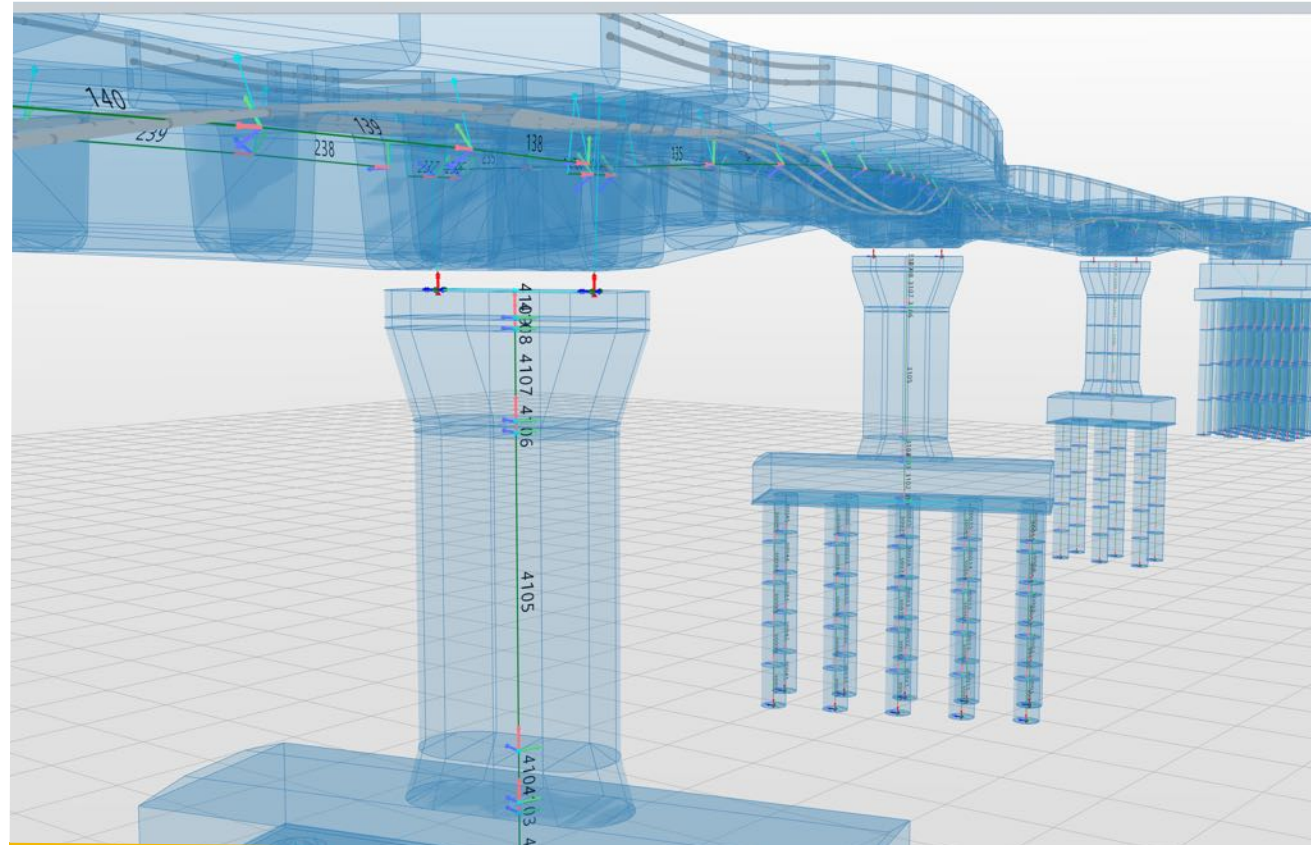
Head of Logistics

Soanseng Strengths

The values we are built on



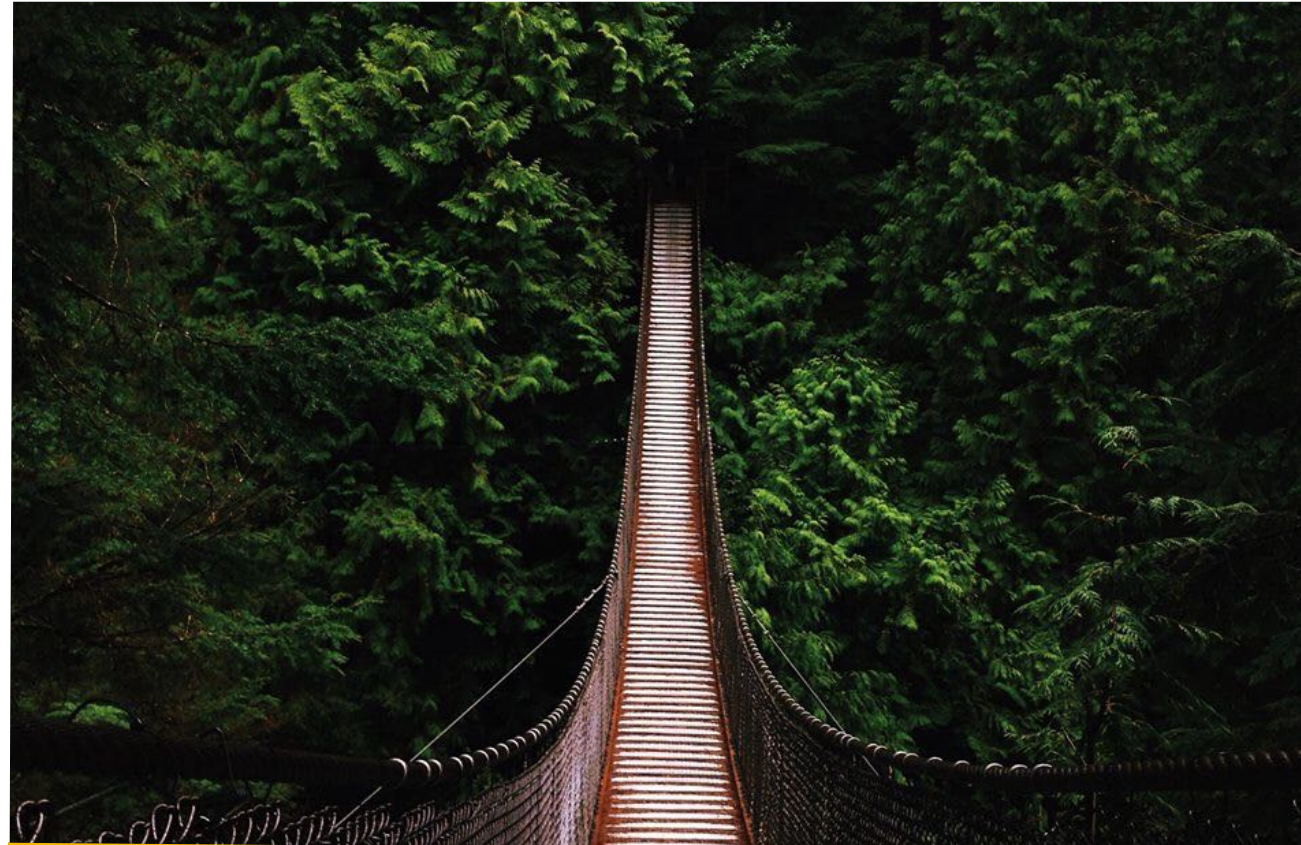
Digitalization



Our 4.0 factory abides with the latest BIM practices. Our information exchange systems, from design to operations & maintenance, cope with international standards ISO:16950 to ensure efficient collaboration in-between all the parties involved such as owner, architect, engineer, occupant, so on.

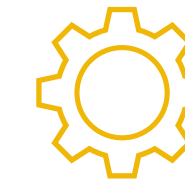


Sustainability



At Soanseng we manufacture 100% recyclable steel and engineer eco-friendly construction method.

In 2021 we launched our 'Tons of Trees' program: 1 tree will grow for every ton of steel produced.



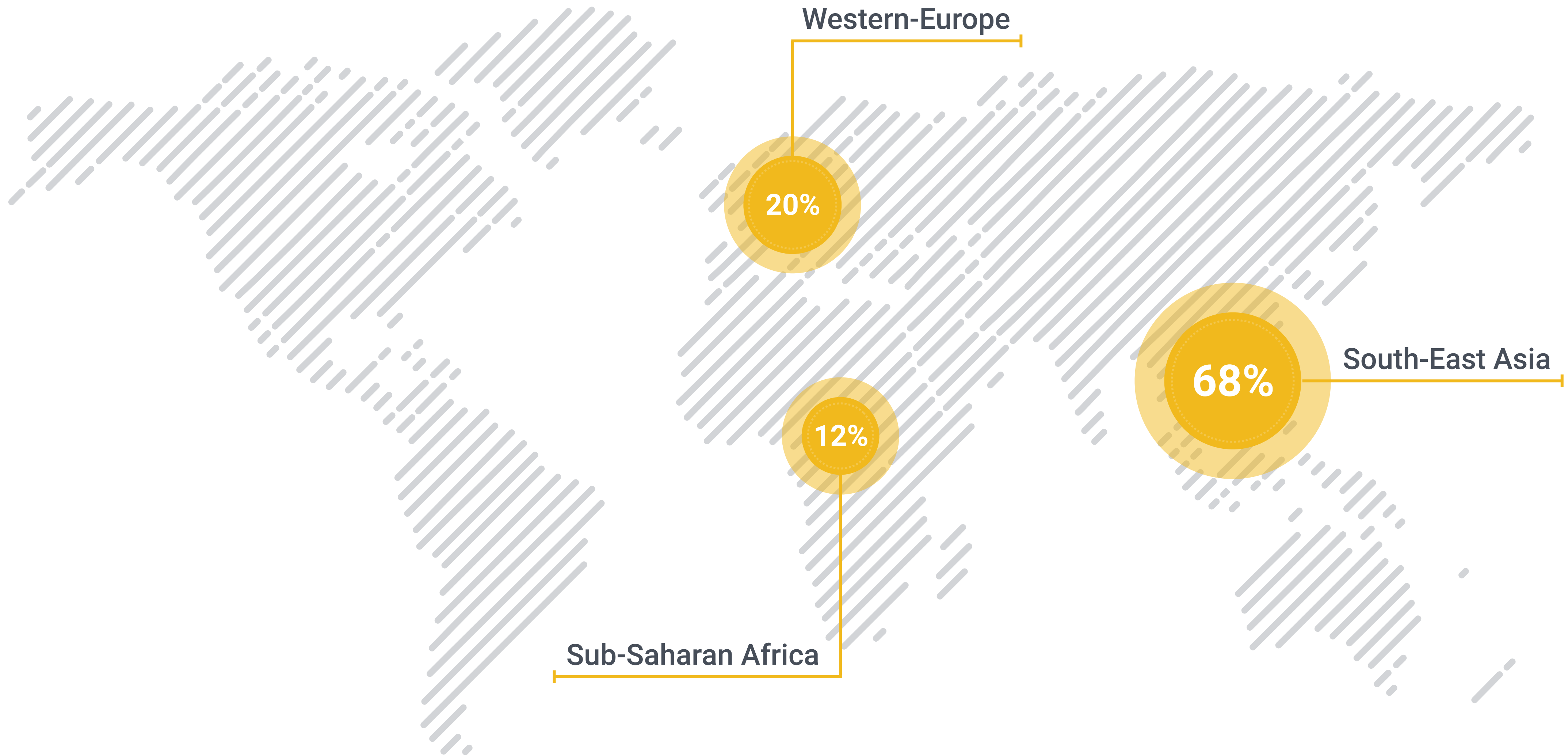
Expertise



The insights of our engineers, construction workers and shop workers lead us to build recognized expertise in steel manufacturing and construction.

Our in-house quality control is the guarantee that we deliver the best, and on time.

Our Projects Around the World



Industries Soanseng is working with

Manufacturing

bridge, workshop, warehouse

- Mechanical Equipment
- Aluminium
- Bath-ware appliance
- Electronic hardware
- Chemicals processing
- Textile processing
- Ceramics
- Building material
- Stainless steel
- Wood processing
- Automobile
- Steel structure
- Office furnitures
- Food processing
- Kitchenware
- Plastic packaging
- Glass bottle processing
- Adhesive tape
- Copper processing
- Home appliance
- Carton packaging
- Machinery tool
- Refrigeration equipment
- Rubber material

Extraction

platform, warehouse

- Mining
- Forestry
- Oil
- Gas

Services

distribution center, exhibition center, building

- Hotel
- Distribution center
- Wholesale market
- Electricity Traffic plant
- High/Low temperature testing room
- Bank & Investment
- Property management
- Education University
- Education junior school
- Telecommunication systems
- Logistics
- Trade of goods
- Real Estate
- Aviation
- Shopping mall

Civil Engineering

bridge, office, park

- Bridge
- Art and Craft park
- Industrial park
- City hall
- Bus station
- Water tank
- Oil tank
- Garden
- Metro

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Soanseng

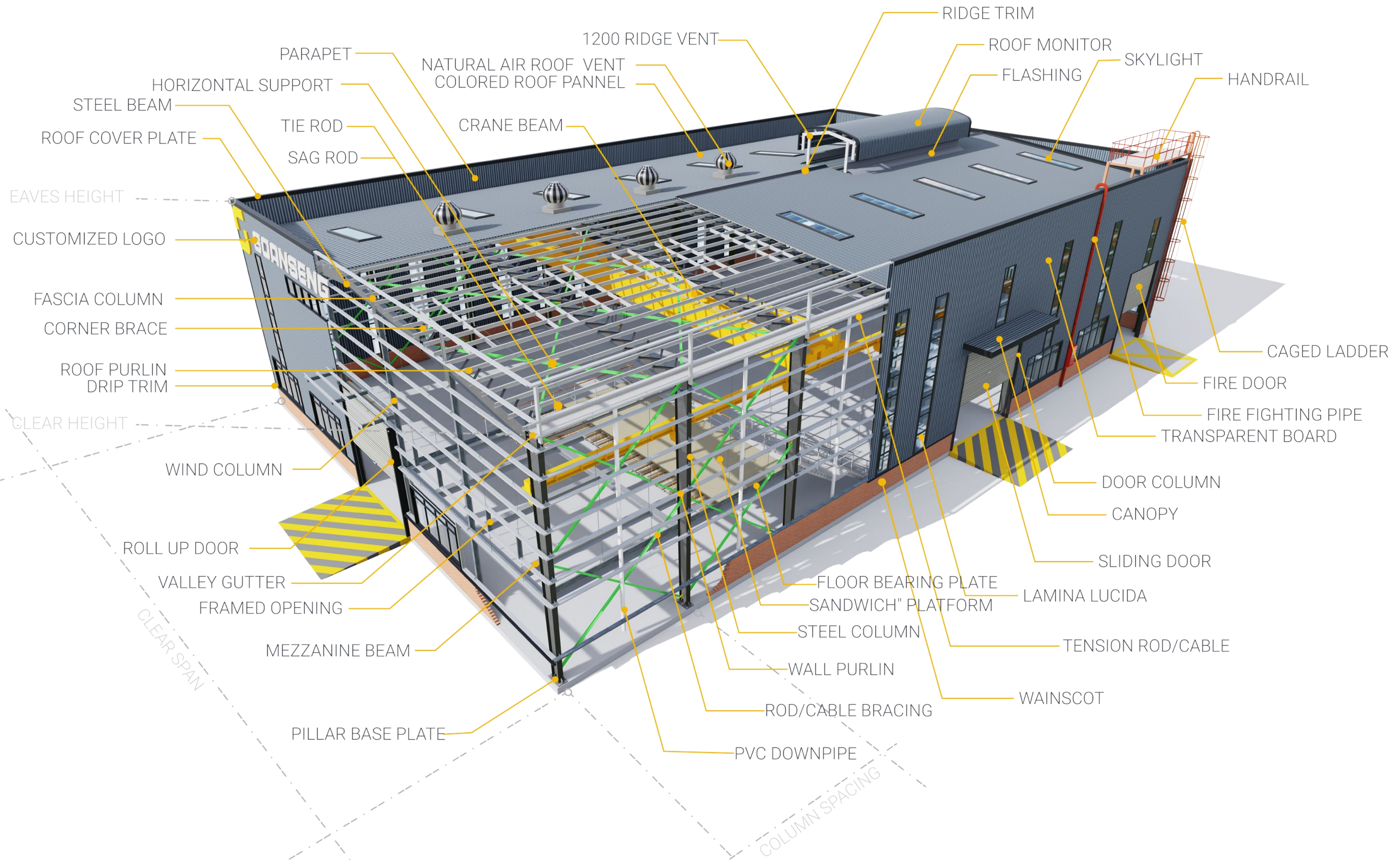
2

Services and Products

3

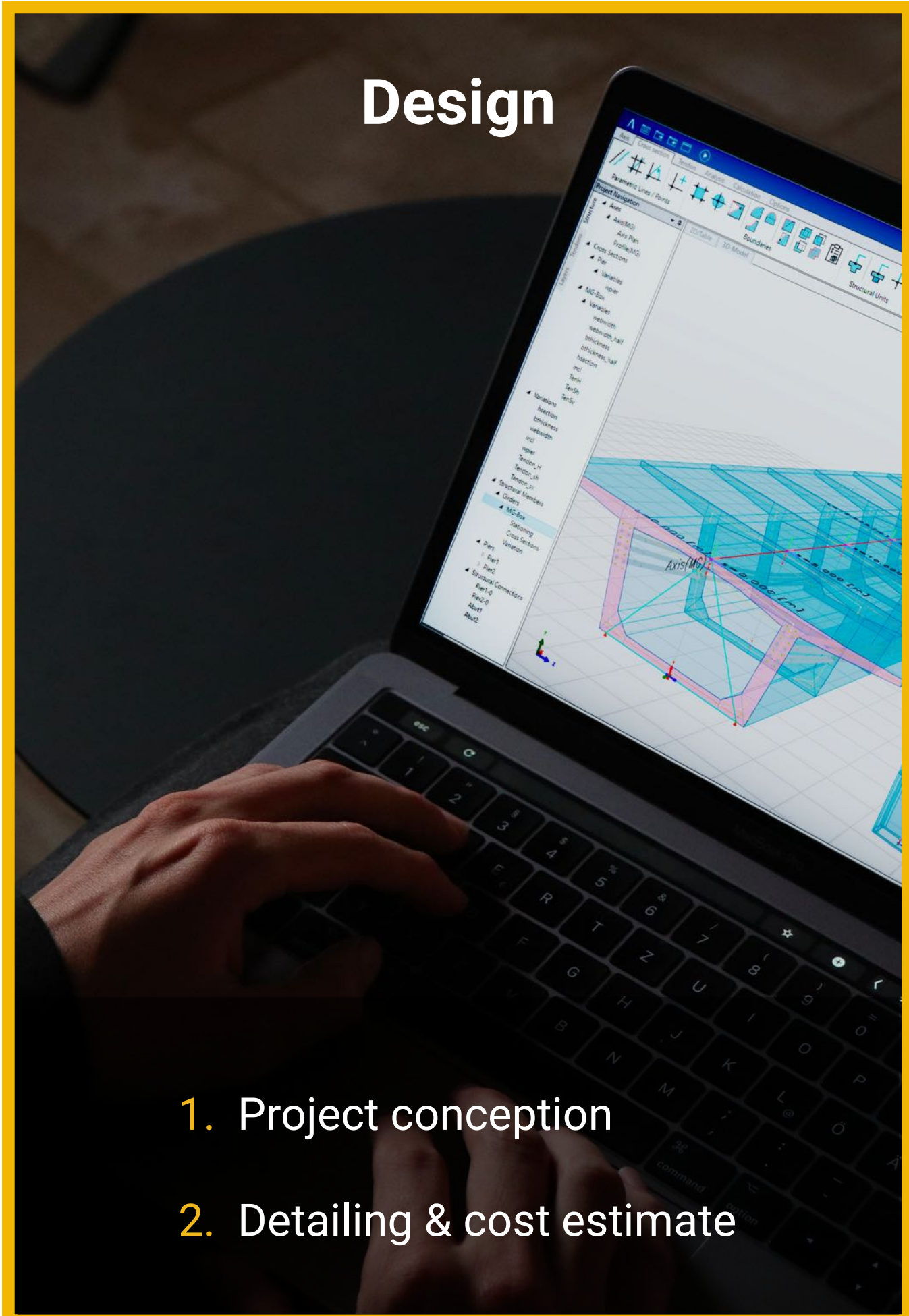
Case Studies

Soanseng Industrial Building



Services Overview

A range of seamless services



Design

1. Project conception
2. Detailing & cost estimate



Production

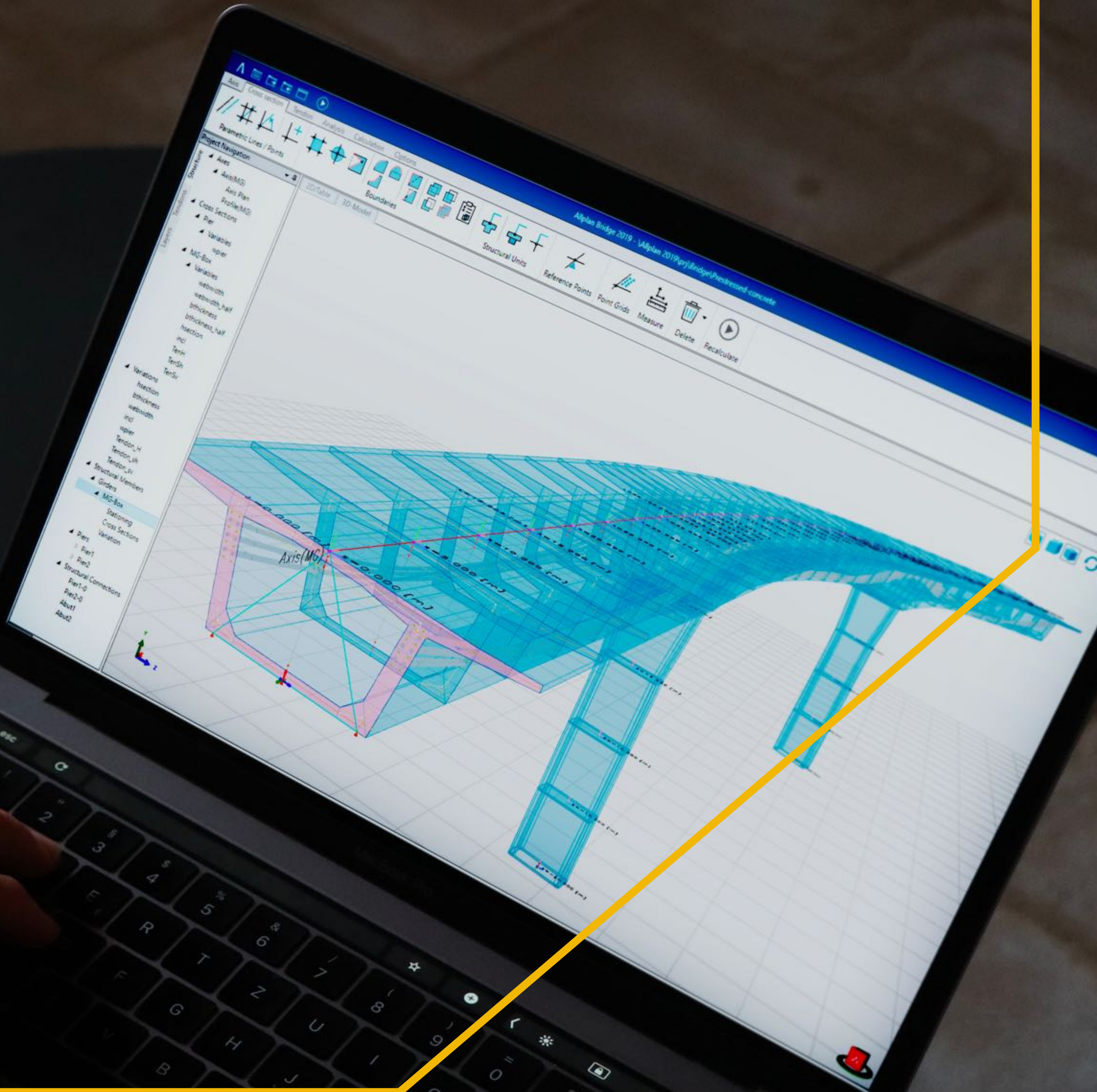
1. Machinery & equipments
2. Steel materials
3. Our steel products



Construction

1. Building techniques
2. Warranty & maintenance
3. Our steel construction solutions

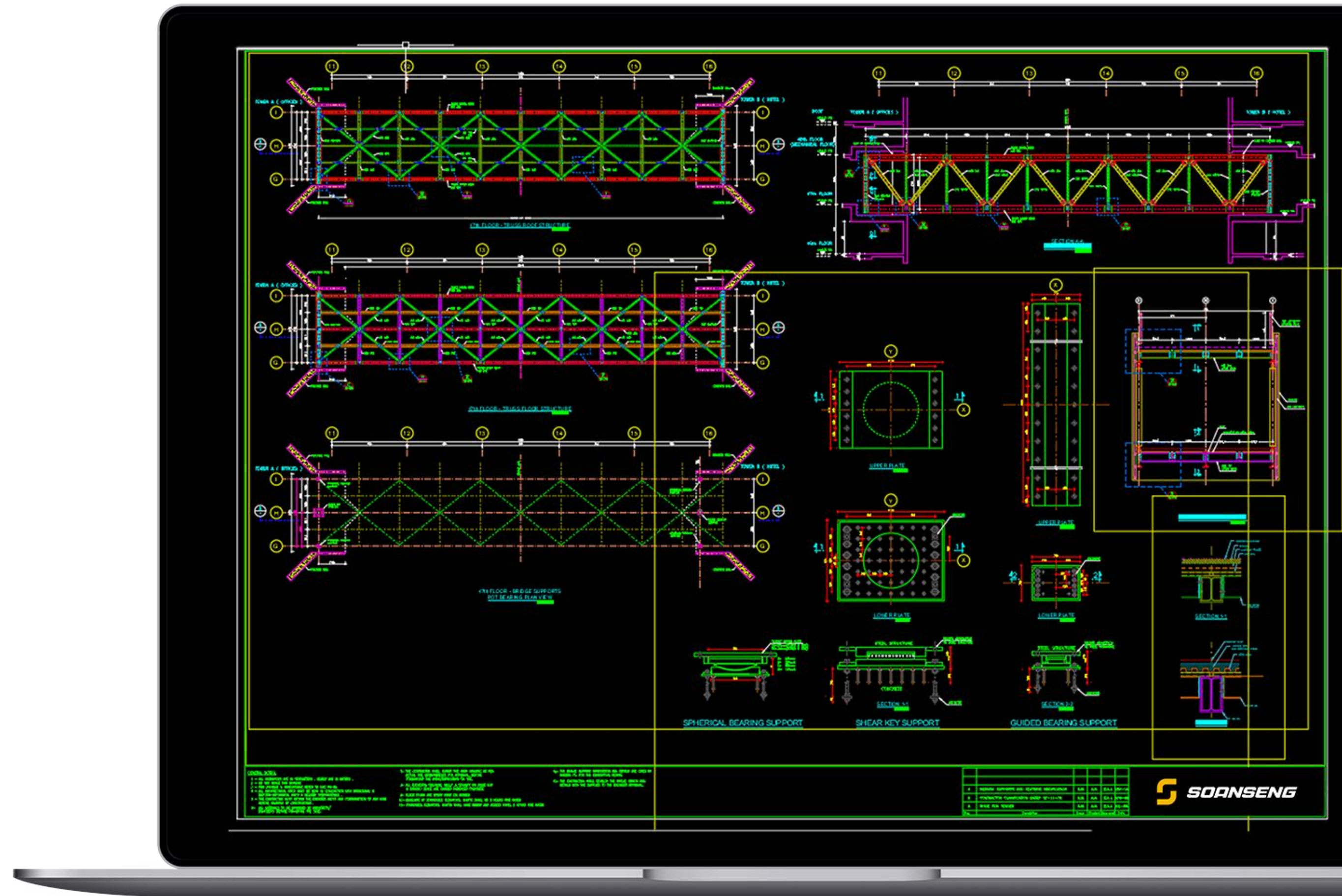
DESIGN



Project Definition

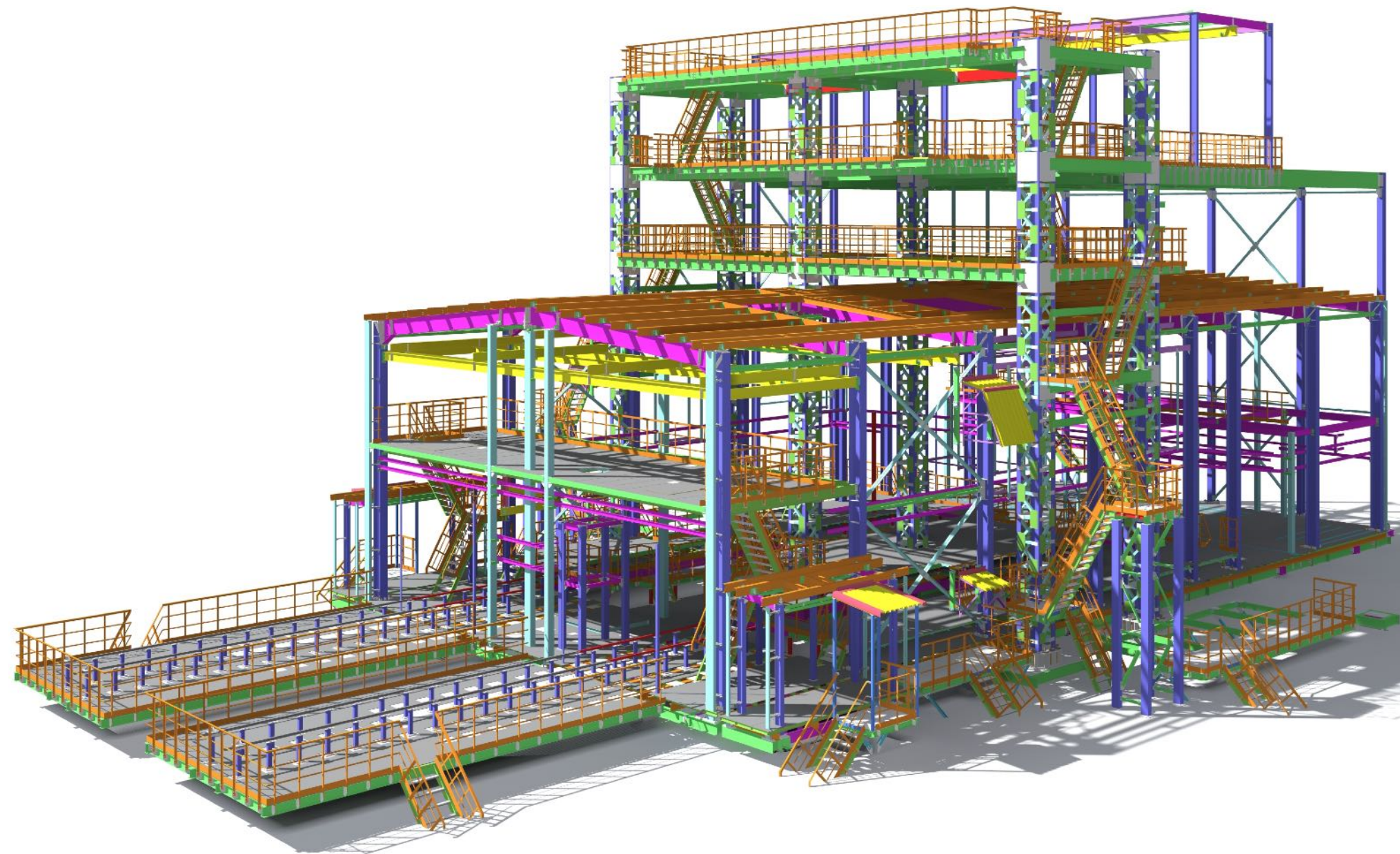
Our team of structural engineers will convert your needs into a set of engineered plans and drawings. From the construction blueprint, we provide a detailed analysis of every components of your infrastructure and deliver accurate Cost estimate, Bill of Materials, Installations guidelines etc..

The insightful digital modelling (BIM compliant) gives a dynamic approach to your projects and ensures that structural and secondary steelworks fit all the unique characteristics of your industrial building. All our designs maximize efficiency as they are consistent with production and installation constraints.

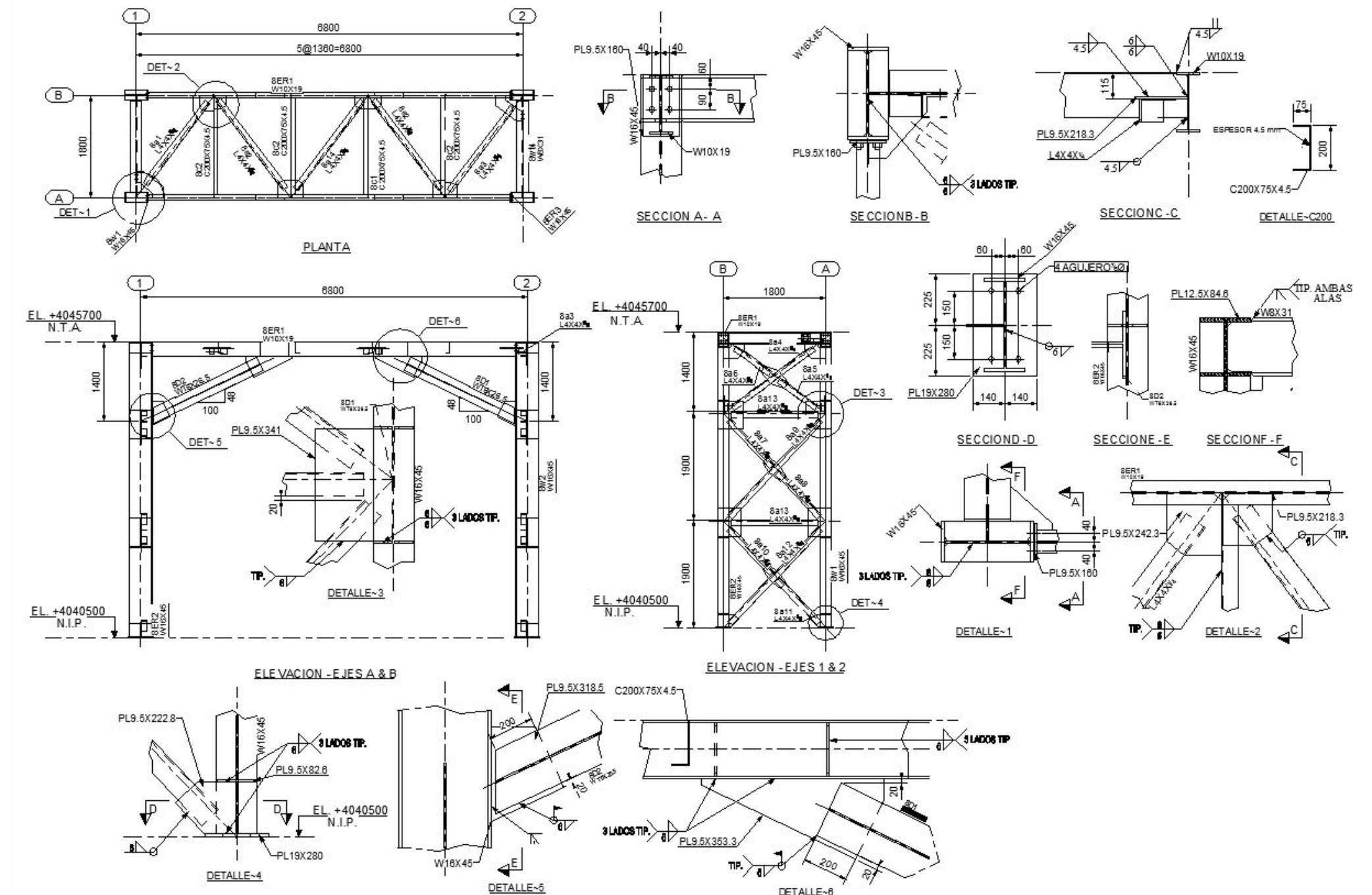


Interactive blueprint sketch

Detailing & Cost Estimate



Our BIM rooted department is operating with the latest software thus are compatible with Tekla, Advancesteel, SDS/2 etc. A team of structural engineers specifies the exact detailing requirements for fabricating each individual piece of your structure.



Our detailed drawings display material specifications, member sizes, all required dimensions, welding, bolting, surface preparation and painting requirements, and any other information needed to describe each finalized components. The shop drawings are intended for use by the Soanseng Shop.

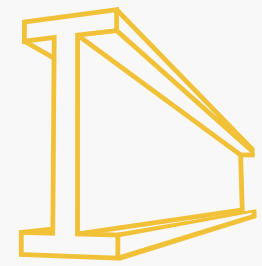


THE SOANSENG SHOP

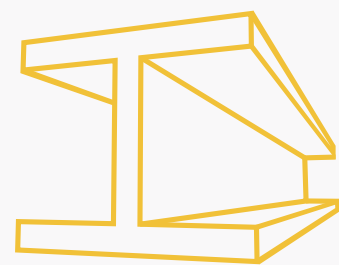
Steel Products

A one-stop-shop that will satisfy your need for steelworks

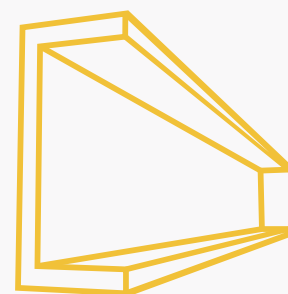
Structural steelworks



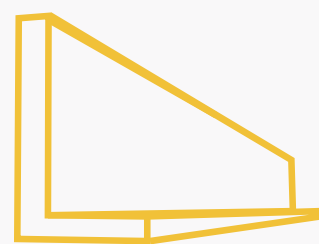
Universal beams (UB)



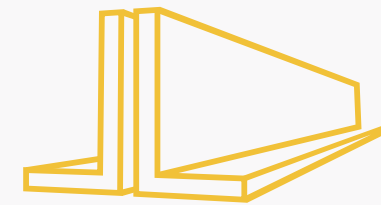
Universal bearing piles (UBP)



Parallel flange channels (PFC)



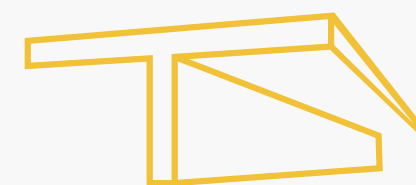
Unequal leg angles (L)



Back to back unequal leg angles (L)



Tees (T) split from UB



Tees (T) split from UC

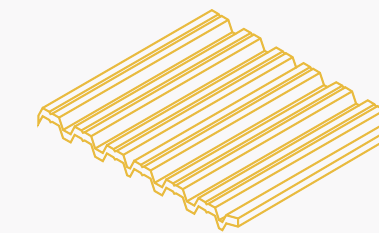


Frameworks

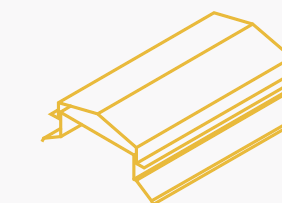
Secondary steelworks



Bolts & Nuts



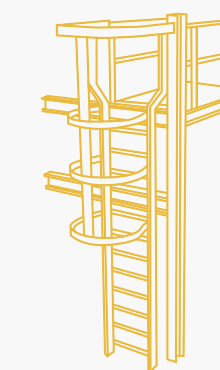
Panels



Roof ventilation



Gutter systems



Platforms

Machinery & Equipments

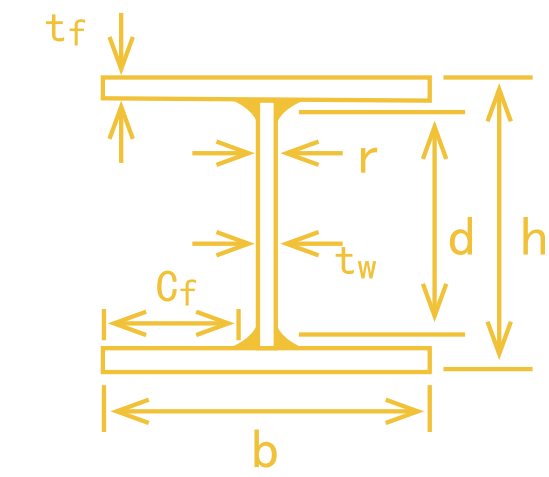
Shop	Machinery (serial number)	Production Area	Use
Auxiliary Component Shop - Foshan-Dali	Shearing machine (Q11-16 x 2500H)	2,000sm ²	Processing of secondary steelworks and accessories
	Pill making machine (250T - 100T)		
	Cold roll forming machine (HG45)		
	Stiffening machine (S-50)		
	Drilling machine (Z3040x10)		
	Column hydraulic press (YH41-100C)		
	Punch press (JE21-80)		
Light Steel Shop - Foshan-Nanhai	CNC flame cutting machine (GS/Z-6000-01)	16,000sm ²	Processing of structural steelworks (light steel)
	H-beam processing line (ITJ-0820)		
	Gantry welding machine (MZG-4000)		
	Straightening machine (JZ-60A)		
	Plane drilling machine (CDMP2012)		
Light & Heavy SteelShop - Wuzhou-Wangfu	Radial drill (Z3080X25)	32,500sm ²	Processing of structural steelworks (light & heavy steel)
	Carbon arc gouging (ZX630)		
	Inverter CO2 gas shielded welding machine (NB630)		
	Blasting machine (HP-1222)		
	High pressure airless spraying machine (AQ9C)		
	waste treatment machine (XF-6)		
...			

Soanseng production assets comprises 3 steel-processing facilities, or 'Shops'. Our modern machinery, combined with in-house ERP softwares ensures cost-efficient production and on-time delivery.

Engineers from France and China collaborate all together to leverage innovative technologies and techniques.

Steel Materials

Beam Dimensions



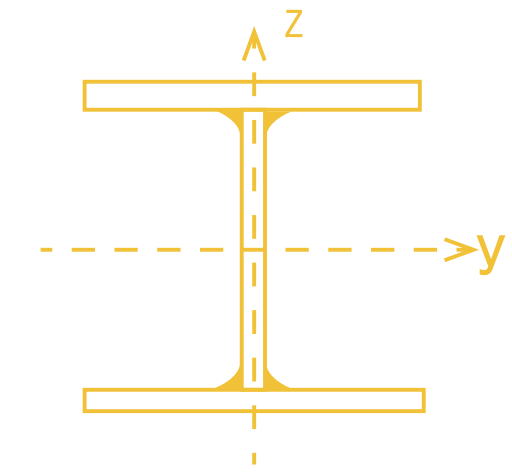
ISO standards compliant

Designation	Mass per meter	Depth of section	Width of section	Thickness		Root Radius	Depth between fillets	Ratios for local buckling		Dimensions for detailing			Surface area	
				Web	Flange			Web	Flange	End clearance	Notch		Per meter	Per ton
		h	b	Tw	tf	r	d	cw / tw	Cf / Tf	C	N	n		
	kg/m	mm	mm	mm	mm	mm	mm			mm	mm	mm	m ²	m ²
1016 x 305 x 584	584.0	1056.0	314.0	36.0	64.0	30.0	868.1	24.1	1.70	20	150	94	3.69	6.32
914 x 419 x 388	388.0	921.0	420.5	21.4	36.6	24.1	799.6	37.4	4.79	13	210	62	3.44	8.87
914 x 305 x 576	576.0	993.0	322.0	36.1	65.0	19.0	824.8	22.8	1.91	20	154	86	3.46	6.00
838 x 292 x 226	226.5	850.9	293.8	16.1	26.8	17.8	761.7	47.3	4.52	10	150	46	2.81	12.4
762 x 267 x 197	196.8	769.8	268.0	15.6	25.4	16.5	686.0	44.0	4.32	10	138	42	2.55	13.0
686 x 254 x 170	170.2	692.9	255.8	14.5	23.7	15.2	615.1	42.4	4.45	9	132	40	2.35	13.8
610 x 305 x 238	238.1	635.8	311.4	18.4	31.4	16.5	540.0	29.3	4.14	11	158	48	2.45	10.3
610 x 229 x 140	139.9	617.2	230.2	13.1	22.1	12.7	547.6	41.8	4.34	9	120	36	2.11	15.1
610 x 178 x 100	100.3	607.4	179.2	11.3	17.2	12.7	547.6	48.5	4.14	8	94	30	1.89	18.8
533 x 312 x 273	273.3	577.1	320.2	21.1	37.6	12.7	476.5	22.6	3.64	13	160	52	2.37	8.67
533 x 210 x 138	138.3	549.1	213.9	14.7	23.6	12.7	476.5	32.4	3.68	9	110	38	1.90	13.7
533 x 165 x 85	84.8	534.9	166.5	10.3	16.5	12.7	476.5	46.3	3.96	7	90	30	1.69	19.9
457 x 191 x 161	161.4	492.0	199.4	18.0	32.0	10.2	407.6	22.6	2.52	11	102	44	1.73	10.7
457 x 152 x 82	82.1	465.8	155.3	10.5	18.9	10.2	407.6	38.8	3.29	7	84	30	1.51	18.4
406 x 178 x 85	85.3	417.2	181.9	10.9	18.2	10.2	360.4	33.1	4.14	7	96	30	1.52	17.8
406 x 140 x 53	53.3	406.6	143.3	7.9	12.9	10.2	360.4	45.6	4.46	6	78	24	1.35	25.3
356 x 171 x 67	67.1	363.4	173.2	9.1	15.7	10.2	311.6	34.2	4.58	7	94	26	1.38	20.6
356 x 127 x 39	39.1	353.4	126.0	6.6	10.7	10.2	311.6	47.2	4.63	5	70	22	1.18	30.2
305 x 165 x 54	54.0	310.4	166.9	7.9	13.7	8.9	265.2	33.6	5.15	6	90	24	1.26	23.3
305 x 102 x 33	32.8	312.7	102.4	6.6	10.8	7.6	275.9	41.8	3.73	5	58	20	1.01	30.8
254 x 146 x 43	43.0	259.6	147.3	7.2	12.7	7.6	219.0	30.4	4.92	6	82	22	1.08	25.1
254 x 102 x 28	28.3	260.4	102.2	6.3	10.0	7.6	225.2	35.7	4.04	5	58	18	0.904	31.9
203 x 102 x 23	23.1	203.2	101.8	5.4	9.3	7.6	169.4	31.4	4.37	5	60	18	0.790	34.2
178 x 102 x 19	19.0	177.8	101.2	4.8	7.9	7.6	146.8	30.6	5.14	4	60	16	0.738	38.8
152 x 89 x 16	16.0	152.4	88.7	4.5	7.7	7.6	121.8	27.1	4.48	4	54	16	0.638	39.9
127 x 76 x 13	13.0	127.0	76.0	4.0	7.6	7.6	96.6	24.2	3.74	4	46	16	0.537	41.3



Steel Materials

Beam Properties



ISO standards compliant

Designation	Second moment of area		Radius of gyration		Elastic modulus		Plastic modulus		Buckling parameter	Torsional index	Warping constant	Torsional constant	Area of section
	Axis y-y	Axis z-z	Axis y-y	Axis z-z	Axis y-y	Axis z-z	Axis y-y	Axis z-z					
									<i>U</i>	<i>X</i>	<i>I_w</i>	<i>I_t</i>	<i>A</i>
	cm ⁴	cm ⁴	cm	cm	cm ³	cm ³	cm ³	cm ³			dm ⁶	cm ⁴	cm ²
1016 x 305 x 584	1246000	33400	40.9	6.70	23600	2130	28000	3480	0.869	18.0	81.2	7150	744
914 x 419 x 388	720000	45400	38.2	9.59	15600	2160	17700	3340	0.885	26.7	88.9	1730	494
914 x 305 x 576	1102000	36500	38.8	7.06	22200	2270	26300	3660	0.874	16.8	77.9	7130	733
838 x 292 x 226	340000	11400	34.3	6.27	7980	773	9160	1210	0.870	34.9	19.3	514	289
762 x 267 x 197	240000	8170	30.9	5.71	6230	610	7170	958	0.869	33.2	11.3	404	251
686 x 254 x 170	170000	6630	28.0	5.53	4920	518	5630	811	0.872	31.8	7.42	308	217
610 x 305 x 238	209000	15800	26.3	7.23	6590	1020	7490	1570	0.886	21.3	14.5	785	303
610 x 229 x 140	112000	4510	25.0	5.03	3620	391	4140	611	0.875	30.5	3.99	216	178
610 x 178 x 100	72500	1660	23.8	3.60	2390	185	2790	296	0.855	38.7	1.44	95.0	128
533 x 312 x 273	199000	20600	23.9	7.69	6890	1290	7870	1990	0.891	15.9	15.0	1290	348
533 x 210 x 138	86100	3860	22.1	4.68	3140	361	3610	568	0.873	25.0	2.67	250	176
533 x 165 x 85	48500	1270	21.2	3.44	1820	153	2100	243	0.859	35.5	0.857	73.8	108
457 x 191 x 161	79800	4250	19.7	4.55	3240	426	3780	672	0.881	16.5	2.25	515	206
457 x 152 x 82	36600	1180	18.7	3.37	1570	153	1810	240	0.870	27.5	0.591	89.2	105
406 x 178 x 85	31700	1830	17.1	4.11	1520	201	1730	313	0.879	24.4	0.728	93.0	109
406 x 140 x 53	18300	635	16.4	3.06	899	88.6	1030	139	0.870	34.1	0.246	29.0	67.9
356 x 171 x 67	19500	1360	15.1	3.99	1070	157	1210	243	0.886	24.4	0.412	55.7	85.5
356 x 127 x 39	10200	358	14.3	2.68	576	56.8	659	89	0.871	35.2	0.105	15.1	49.8
305 x 165 x 54	11700	1060	13.0	3.93	754	127	846	196	0.888	23.6	0.234	34.8	68.8
305 x 102 x 33	6500	194	12.5	2.15	416	37.9	481	60	0.867	31.6	0.0442	12.2	41.8
254 x 146 x 43	6540	677	10.9	3.52	504	92	566	141	0.890	21.1	0.103	23.9	54.8
254 x 102 x 28	4000	179	10.5	2.22	308	34.9	353	54.8	0.874	27.5	0.0280	9.57	36.1
203 x 102 x 23	2100	164	8.46	2.36	207	32.2	234	49.7	0.888	22.4	0.0154	7.02	29.4
178 x 102 x 19	1360	137	7.48	2.37	153	27	171	41.6	0.886	22.6	0.00990	4.41	24.3
152 x 89 x 16	834	89.8	6.41	2.10	109	20.2	123	31.2	0.889	19.5	0.00470	3.56	20.3
127 x 76 x 13	473	55.7	5.35	1.84	74.6	14.7	84.2	22.6	0.894	16.3	0.00200	2.85	16.5





CONSTRUCTION

Building Techniques

Pre-construction services

We assign a dedicated team to **each project including engineering, manufacturing, installation and quality control advisors.**

Deliverables: 3D virtual construction model; Bill of material & equipments, Construction program, Detailed cost estimate, Project timetable

During Construction services

From sub-floor fondation to finishings, **we handle Building method specifications at every steps.**

Deliverables: Weekly production status report, Daily construction status report, Project documentation recording, Monthly project report

After-construction services

After quality inspection, we handle **a full set of your infrastructure plans** including detailed locations of fluids, pipelines, security installations etc. to facilitate operation and maintenance. We also provide the whole project in **videos and images.**



Construction Materials

Made in Soanseng to ensure reliability and quality

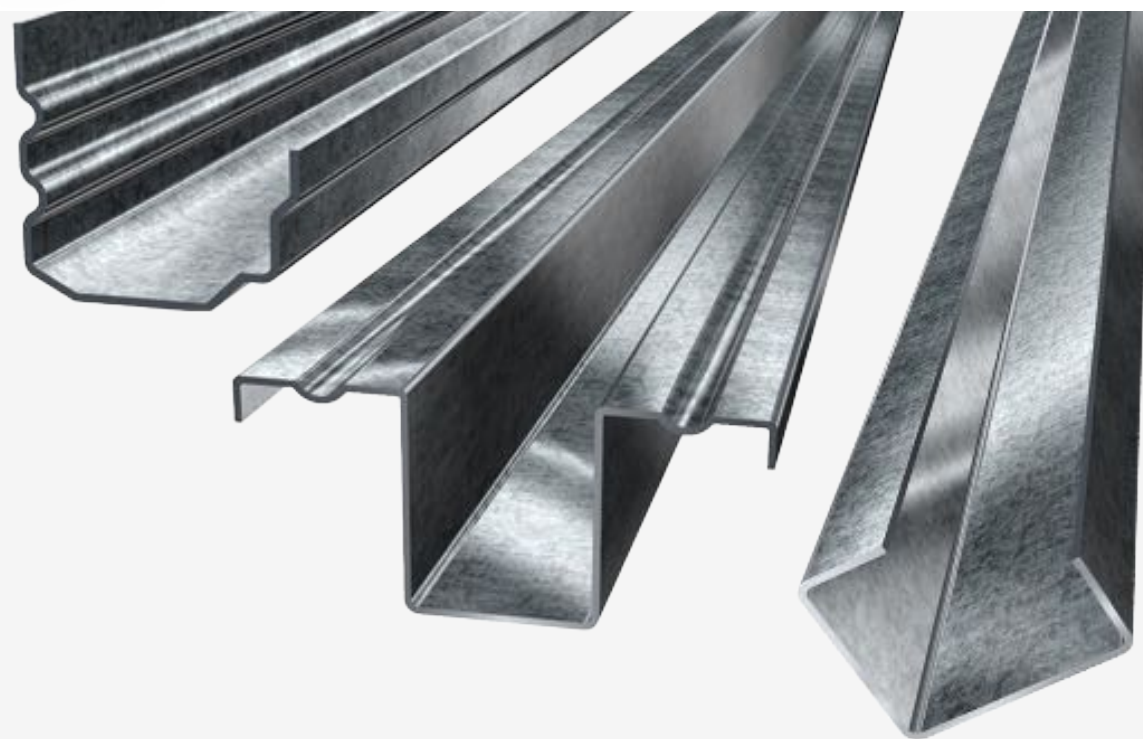
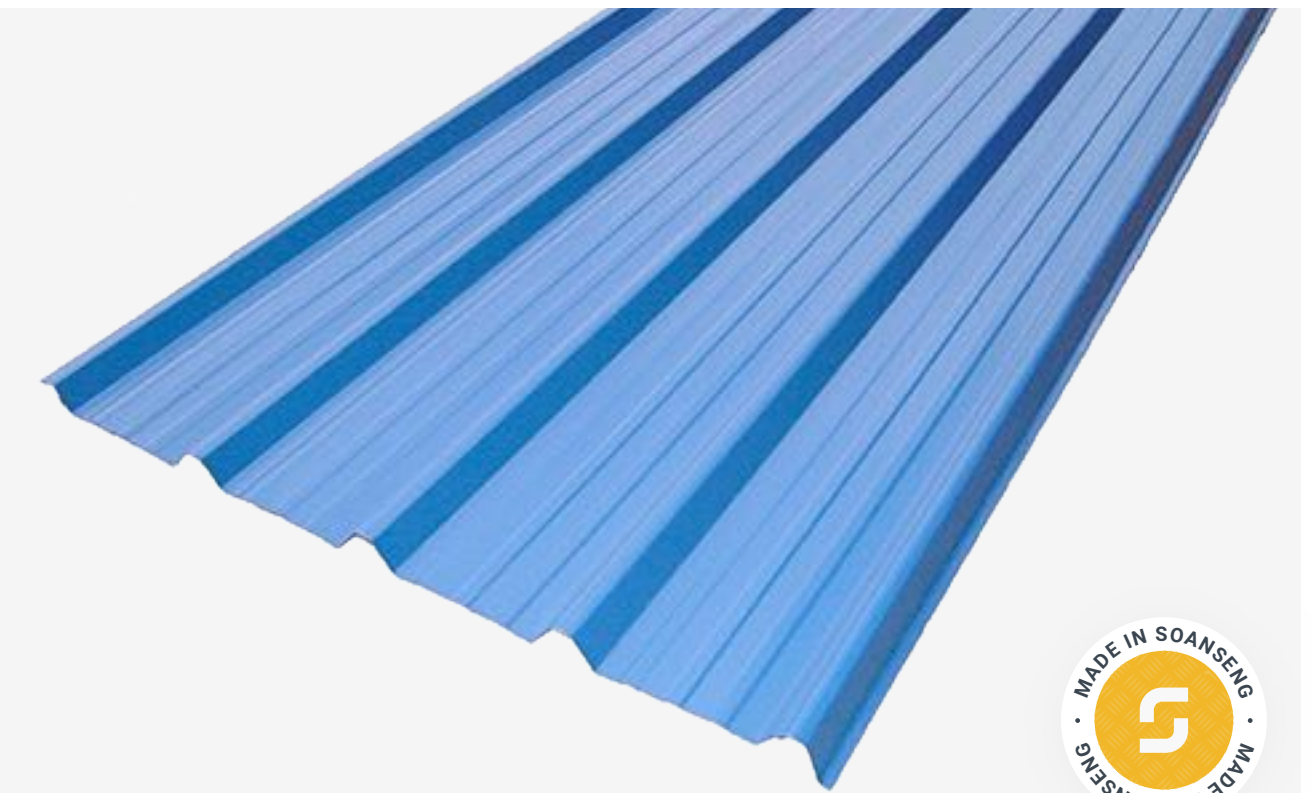


At Soanseng
The Natural Roof Ventilation has
patented 3-in-1 **Air Pollution Noise**
quality control system

Solar panel in option

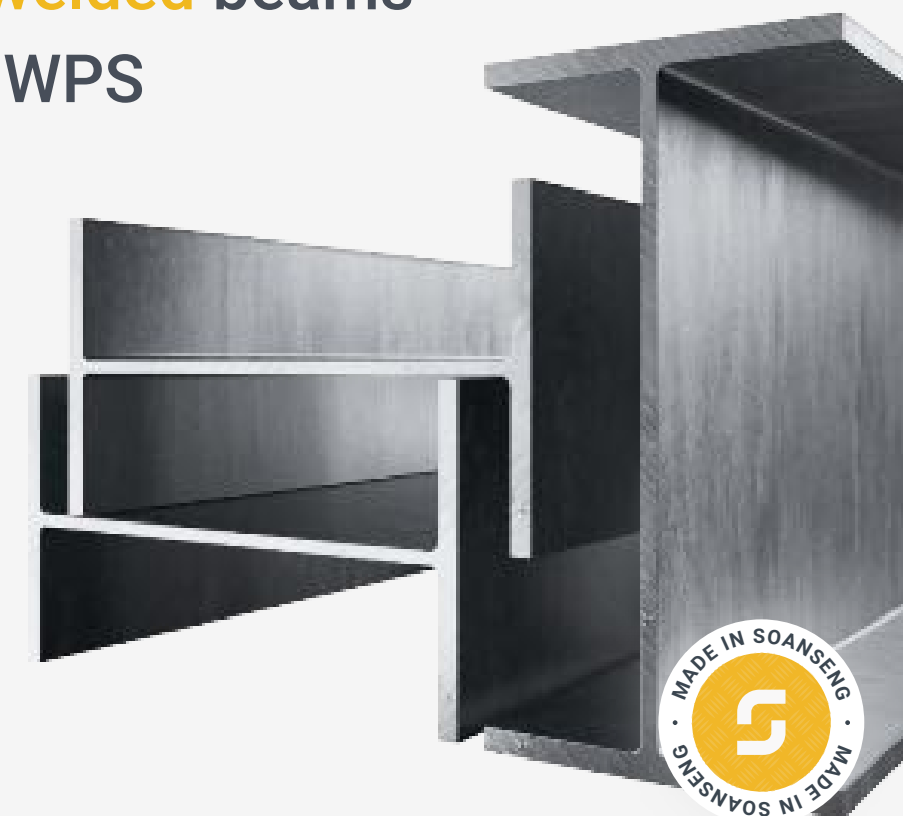
The steel sheets
are **warranted 20 years**
against corrosion

Self-cleaning painting in option
(no more manually-operated maintenance)



Gutters and water evacuation
systems are **warranted 15 years**
against permeability

Soanseng uses hot-rolled
standardized steel profiles
and **first class welded** beams
compliant with WPS
requirements



Steel-made high-strength bolts and
nuts are **warranted 15 years**
to secure connections



Our Range of Services

Soanseng Warranty	FIT-STD EC	PRO-ER8	HIGH-DEV S
Realization of design blueprint			5
Construction permit administrative support			5
Optimization of design blueprint		5	5
Detailed drawings and listing of building components	5	5	5
Weekly digitalized report status on production and construction			5
20 years warranty on Zinc-aluminum self-tapping screws to fix roof and walls panels			5
Top quality steel roofing anti-condensation fleece		5	5
10 years warranty on Hot-dip galvanized bolttable gutters			5
Visit of the production Shops and offices		5	5
15 colored paintings with no extra-fees	5	5	5



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Services and Products

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Case Studies

Guangdong Arts and Crafts Industrial Park

Wuzhou, Guangdong Province, China

Concrete-steel composite office building and R&D center steel workshop (9 floors)



Gross internal area **81,475 sqm**

Steel tonnage (t) **3500**  **3800**

Structural cost (M€) **5,8**  **6,5**

Cost (€ per sqm) **72**  **75**

Delivery timing (days) **320**  **400**

Floor-to-ceiling height Office building and R & D building are 27.9m and the factory is 23.1m

Span Office building and R&D center: 40m
Workshop: 27m

External envelope 50mm thick rockwool sandwich panel

Doors and Windows Windows stand for 80% of the external facade of office building and R&D center. Automatic sliding and rolling doors for the workshop.

Ventilation 61 natural roof ventilators half colored and transparent 0.5mm thick panels

Railway Station Pedestrian Foot Bridge

Foshan, Guangdong Province, China



Long Span Steel Bridge


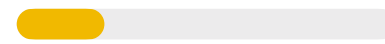
Gross internal area	282 sqm
Steel tonnage (t)	33 38
Structural cost (M€)	120 150
Cost (K€ per sqm)	450 500
Delivery timing (days)	450 600
Length	76,2 meters
Span	3,7 meters
Details	Reinforced concrete stairway, and vertical elevator is set at both ends of the overpass. The bridge is equipped with skylight ceiling.

Stainless Steel Factory

Foshan, Guangdong Province, China



Two-storey steel structure workshop

Gross internal area	3621 sqm
Steel tonnage (t)	140  150
Structural cost (K€)	200  220
Cost (€ per sqm)	55  60
Delivery timing (days)	35  50
Floor-to-ceiling height	20 meters
Span	66 meters
External envelope	This striking 18 meter eaves high plant features 80mm and 120mm insulation panels for roof and wall applications.
Doors and Windows	The HDM200 Ultra® 12m wide sliding door dedicated for industrial appliance is made of special high-strength aluminum alloy material to reduce the weight of the door body and make it easy to use.
Ventilation	Installation of 1200mm ridge type air tower at 80% of building length

Aluminium Production Center

Foshan, Guangdong Province, China



Industrial workshop and warehouse

Gross internal area	200,000 sqm
Steel tonnage (t)	5500 <input type="range" value="5500"/> 6200
Structural cost (M€)	8,0 <input type="range" value="8,0"/> 9,0
Cost (€ per sqm)	40 <input type="range" value="40"/> 50
Delivery timing (days)	600 <input type="range" value="600"/> 900
Floor-to-ceiling height	12 meters
Span	Factory: 60m Warehouse: 120m
External envelope	960 fire-proof and anti-corrosion color steel tile is adopted for roof and wall appliance.
Doors and Windows	The logistics warehouse adopts 12m wide electric doors. Windows account for 55% of the fence area.
Ventilation	Mixed ventilation system is adopted to the production facility, including mixed flow fan and 750 and 900 ridge vents.



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