

Request for Proposal

P1384 – Auramine Beqtaqari

Detailed Engineering Project



P1384-100-PC-001

Overhead Cranes

Rev	Name	Date	Name	Date	Name	Date	Revision text
	Prepared		Checked		Released		
Customer	RMG Auramine LLC			Project Number	P1384		
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1 INTRODUCTION AND PROJECT DESCRIPTION

Chemitec Consulting Oy (Chemitec) has been commissioned by RMG Auramine LLC to carry out the detailed engineering for the Beqtaqari polymetallic concentrator. The concentrator will be located in southern Georgia (Eastern Europe), approximately 50 km southwest from capital Tbilisi, near the town of Bolnisi. Site access will be via paved local roads. Refer to figure 1 for general site location

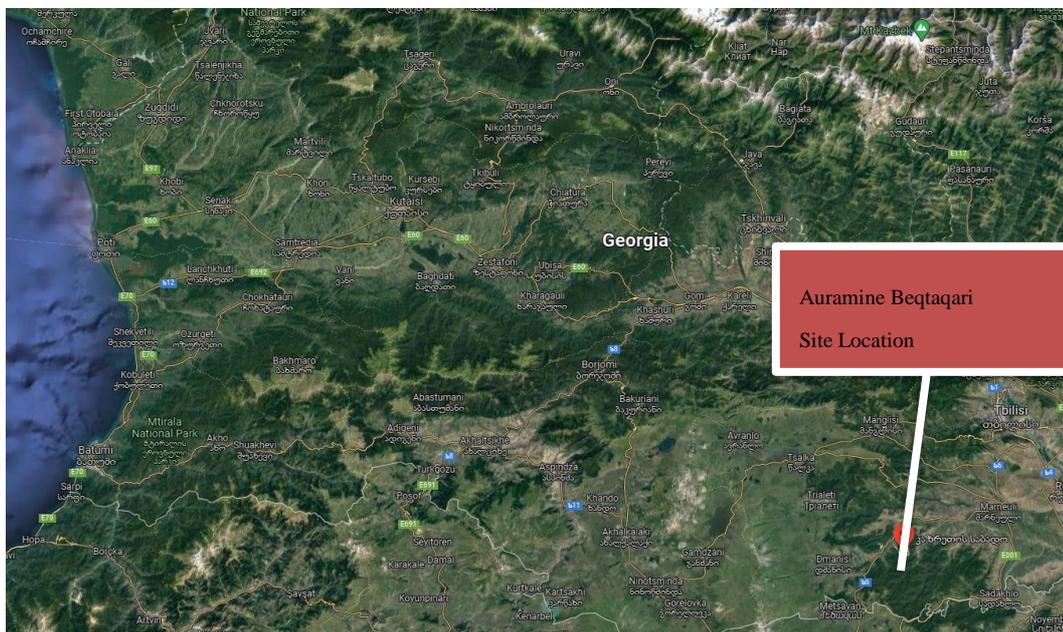


Figure 1: RMG Auramine LLC, Concentrator site location

The present document covers and provides the minimum requirements and specifications needed for Overhead Cranes requested by RMG Auramine LLC project.

2 COMMUNICATIONS AND SUBMISSIONS

All communications with respect to the RFP are to be directed to RMG Auramine LLC, by email to the below list of recipients:

Recipient	Position	Contact email
Gvantsa Gvazava	Head of Procurement Group	ggvazava@richmetalsgroup.com
Aleksandr Patrakeev	Deputy managing Director for production	APatrakeev@richmetalsgroup.com
Ivan Sobolev	Equipment batching and scheduling engineer	ISobolev@richmetalsgroup.com

Complete, technical and commercial proposals as separate documents to be submitted in electronic format.

3 CLOSING DATE

Technical and Commercial Proposals to be sent no later than 5:00PM EET on 21th of July, 2023

4 SUBMISSIONS

The documents and all drawings, design, specifications and other data appended or related to it are the property RMG Auramine LLC and are supplied only for the purpose of enabling each potential bidder to prepare and submit a proposal package. The information contained or referred to in the RFP documents or appended to it is not to be disclosed or released for any other use or purpose.

5 PRICING

A lump sum with fixed and firm prices, in USD (\$) or Euros (€), without subjected price escalation and exclusive of local taxes must be furnished for all items included in chapter 6 – Scope of delivery. The commercial proposal should also provide the breakdown of prices by individual item quoted within the scope.

6 SCOPE OF DELIVERY

The scope will cover the provision of complete and functional overhead crane. The Scope of delivery shall include the equipment as per the list below:

Name	TAG Number	Quantity	Main lifting capacity/ t	Aux lifting capacity/ t	Amounts of hoists
Overhead Crane	300-CN-001	1	10	3	double hoist
Overhead Crane	305-CN-001	1	10	3	double hoist
Overhead Crane	400-CN-001	1	10	3	double hoist

Name	TAG Number	Digital weight scale	Operator Cabin (See position in the drawing)	Location of the cranes
Overhead Crane	300-CN-001	included for main hoist	Included	Flotation Building
Overhead Crane	305-CN-001	included for main hoist	Included	Bulk Tailings Filtration Building
Overhead Crane	400-CN-001	included for main hoist	Included	Zn Tailings & Concentrate Filtration Building

Additional requirements and points of interest:

- Each crane needs to be controllable via wireless remote control and from the included operator table.
- The weight measurement of the main hoists and auxiliary hoists (if any) should be readable from the wireless remote control and from a display inside the operator's cabin.
- Walkways on the crane frame, which serve two purposes:
 - As emergency exit for the crane operator inside the operator cabin.
 - To allow access for maintenance of the crane.
- Two separate moving speeds for each crane's traversing speed, travelling speed, hoisting speed and auxiliary hoisting speed. Below are some indicative values. The supplier is welcome to give their own recommendation.

Flotation building - 300-CN-001
Traversing speed 32 m/min, 2-speed
Travelling speed 40 m/min, 2-speed
Hoisting speed 8/1.3 m/min, 2-speed
Hoisting Aux speed 16/2.7 m/min, 2-speed
Bulk Tailings Filtration building - 305-CN-001
Traversing speed 32 m/min, 2-speed
Travelling speed 40 m/min, 2-speed
Hoisting speed 8/1.3 m/min, 2-speed
Hoisting Aux speed 16/2.7 m/min, 2-speed
Zn tailing & Concentrate Filtration building - 400-CN-001
Traversing speed 32 m/min, 2-speed
Travelling speed 40 m/min, 2-speed
Hoisting speed 8/1.3 m/min, 2-speed
Hoisting Aux speed 16/2.7 m/min, 2-speed

- If the vendor is supplying electromagnetic ball lifters, one piece can be offered as an optional item with the proposal.
- The table below shall provide a short summary of the intended use for the overhead cranes:

Flotation building - 300-CN-001
Installation and maintenance of equipment (e.g. flotation cells and their rotors)
Everyday maintenance issues
Bulk Tailings Filtration building - 305-CN-001
Maintenance of equipment (e.g. Changing filter plates from pressure filters).
Everyday maintenance issues
Zn tailing & Concentrate Filtration building - 400-CN-001
Maintenance of equipment (e.g. Changing filter plates from pressure filters).
Everyday maintenance issues

Each complete overhead cranes datasheet will consist of but not limited with:

- Overhead crane dimensioned for the given data
- Electric motor
- Mechanical drive system

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- Overload protection
- Bridge and trolley travelling motors protection
- Electrical control panel including fused disconnect switch
- Radio remote control and pendant control
- Normal lifting speed and slow speed for equipment installation (2 lifting speed)
- All necessary instrumentation
- Safety Devices and Guards
- Weight of operation cabin
- Any other component that the vendor might find suitable for the proper operation of the equipment

Electrical and instrumentation specifications:

- Standards: IEC Standards.
- Duty type: Continuous.
- Operating Voltage: 400 V
- Frequency: 50hz
- Protection: shall be equipped with protection of suitable IP rating.

Additionally, the following items are to be included in the technical proposal for all bidged equipment:

- Detailed technical specification: Dimensions, performance, electrical and physical data
- Type and list of equipment
- Standard drawing of the proposed system/equipment (.PDF and .DWG)
- Standard schematic showing the main equipment and all their auxiliary components which are included (.PDF and .DWG)
- 3D General Arrangement models if available
- Installation drawings and installation, operation, and maintenance manuals (language Russian if available and/or English)
- Mechanical guarantee
- Trial Assembly
- Reports of inspection and testing
- Special tools for field erection and maintenance
- Equipment tests and registers (X-rays, magnetic particles, others)
- Any other component that the vendor might find suitable for the proper operation of the equipment
- Vendor drawing and Data Requirement (VDDR) and schedule.
- Other options if any

The commercial proposal must be detailed and include the following information:

- Price breakdown
- Payment milestone
- Commissioning and start-up spares.

- Spare parts for 2 years of operation
- Delivery term FCA
- Delivery date
- Warranty
- Shipping weight and dimensions
- Validity of quotation
- General Terms and Conditions
- Site supervision services (daily rate + rate during travel (if charged any). RMG will provide accommodation, meal and transfers. The supervision services should also include number anticipated days and total budget.
- List of relevant references

7 DESIGN INFORMATION

7.1 Site and Operation Conditions

General Data		
Latitude	° / min / sec	41°22'35" N
Longitude		44°25'30" E
Altitude approx. in m (MSL)	m	742
Maximum temperature, celcius degrees	°C	40
Minimum temperature, celcius degrees	°C	-25
Rainfall (snow+water), mm H₂O	mm	740
Average snow cover approx. in cm	cm	12
Relative humidity	%	76 (average)

Seismicity Parameters

Annual Exceedance Probability (AEP)	MSK-64	PGA (g)
1:1,000 year (5% in 50 years)	8	0.20 - 0.30
1:2,500 year (2% in 50 years)	9	0.20 - 0.30
1:5,000 year (1% in 50 years)	9	0.30 - 0.40

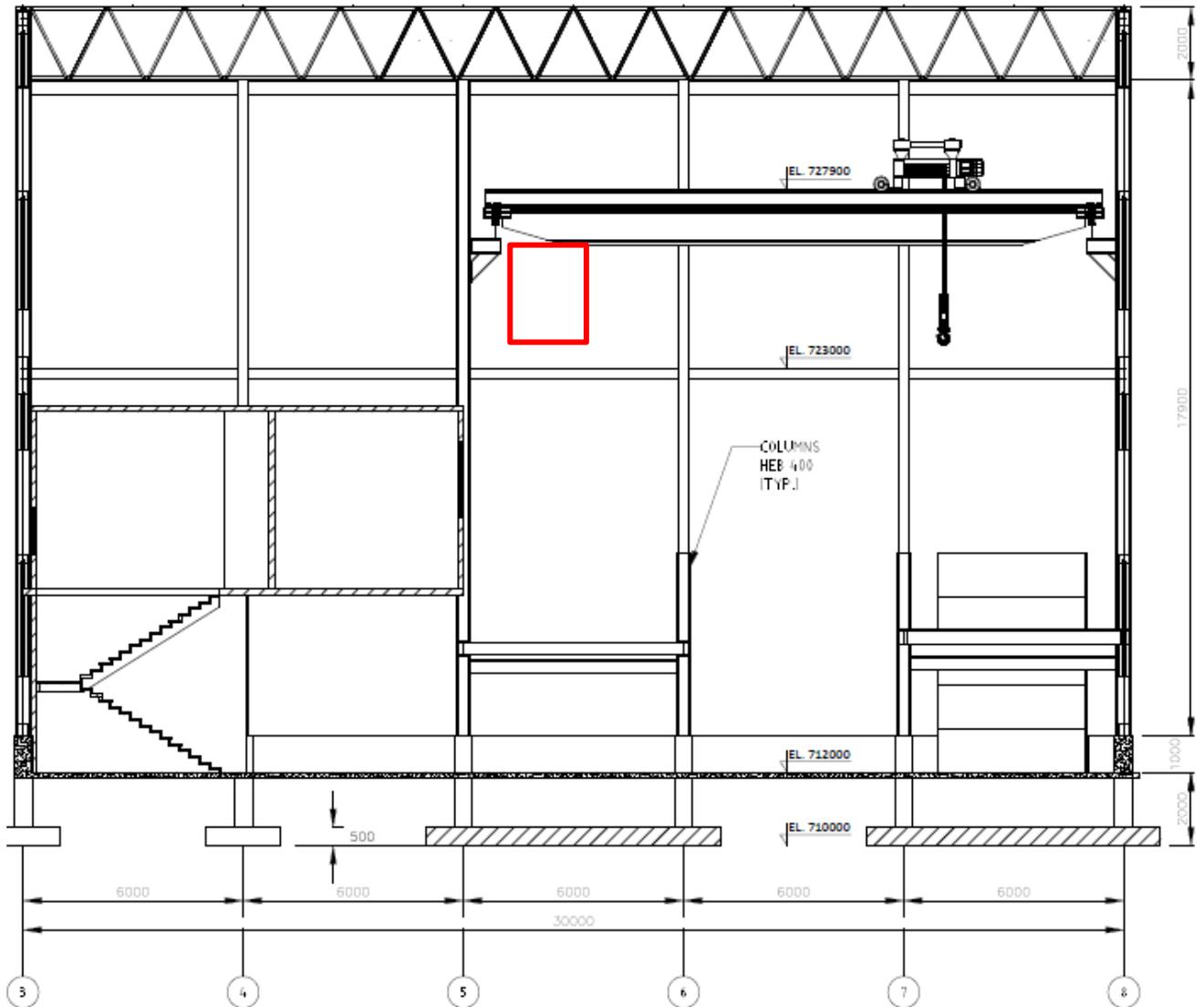
Maximum seismicity parameters from the table – 0.4 g.

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7.2 Data Sheet and Flotation Building Drawing for Overhead Crane in Flotation Area

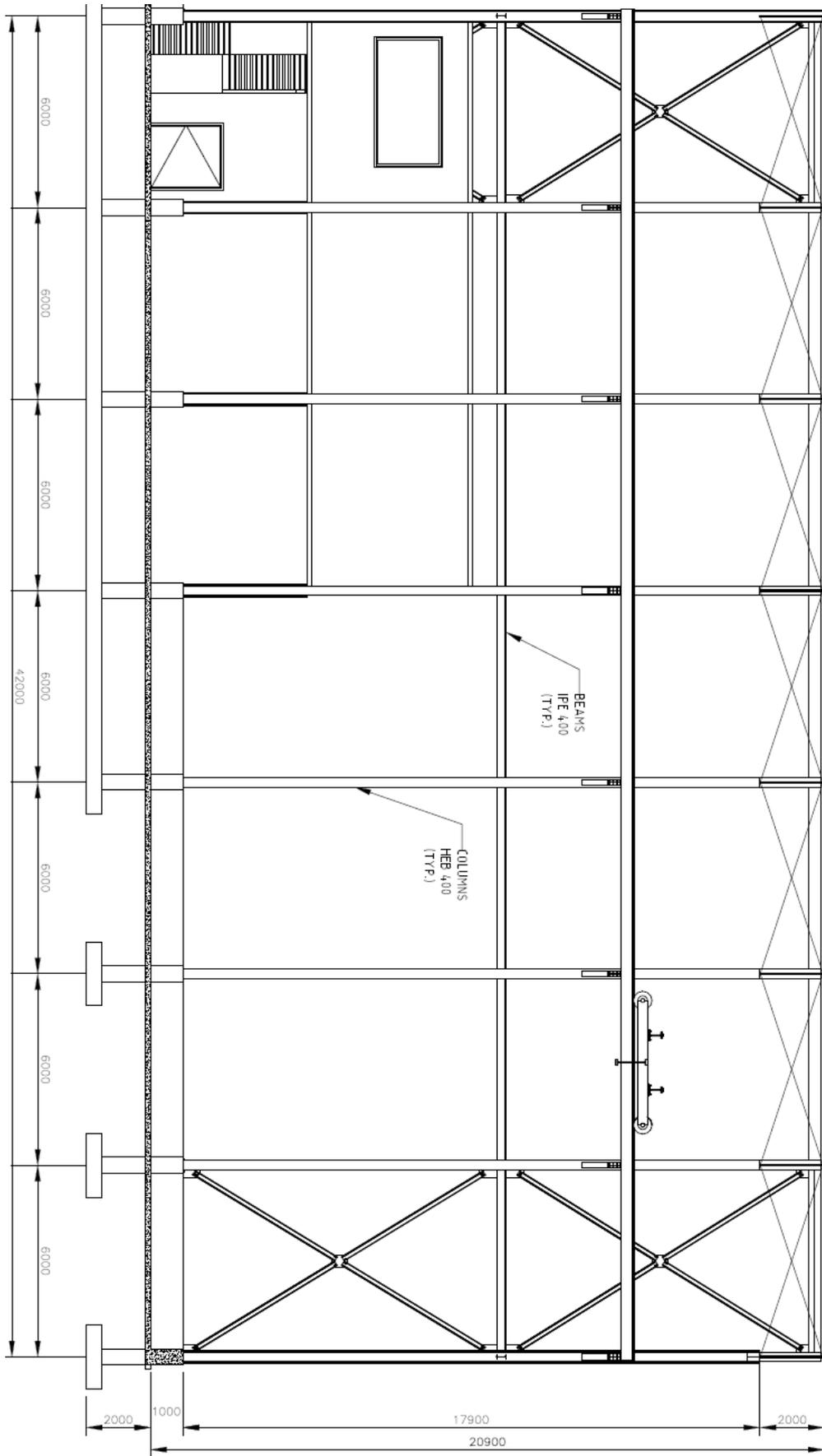
Equipment Description	
Equipment name	Flotation area overhead crane
TAG Number	300-CN-001
Equipment type	Overhead crane
Model	To be determined by supplier
Process Data	
Crane requested for	Flotation building
Heaviest part to lift	7 tons
Requested main lifting capacity	10 tons
Requested Aux. lifting capacity	3 tons
Building size L x W x H	42000 mm x 18000 mm x 18900 mm
Crane area dimensions L x W x H	40600 mm x 16900 mm x 16500 mm
Highest point to lift	16500 mm (from bottom to top of lifted flotation rotor)
Crane travel	40600 mm
Crane span	16900 mm
Operating conditions	
Plant elevation	750 m above sea
Facility temperature (indoor)	20 °C
Area's operation time	16 h per day / 7 days per week / 52 weeks per year
Area's availability	90% daily target
Electrical power supply for crane	400 V / 3 Ph / 50 Hz

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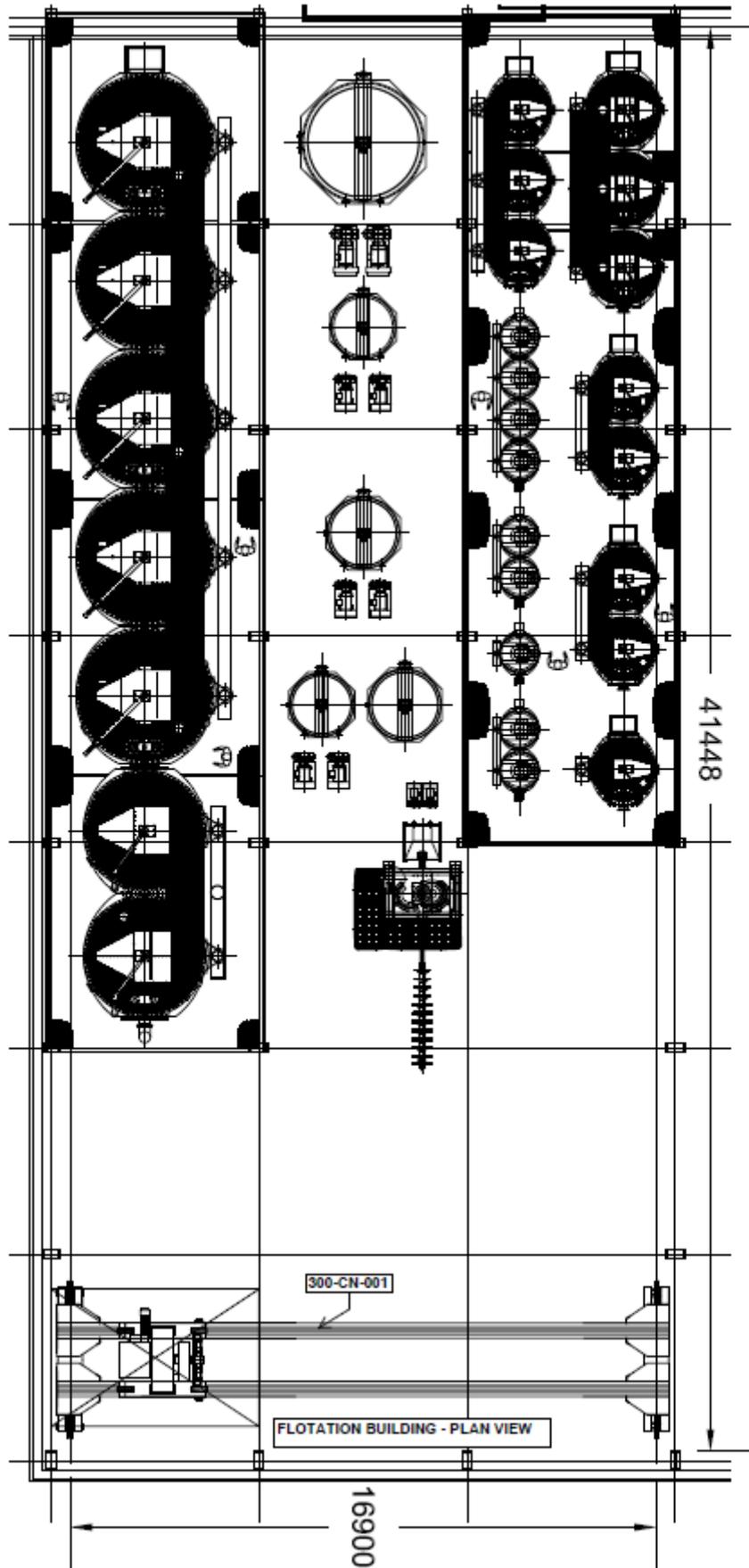


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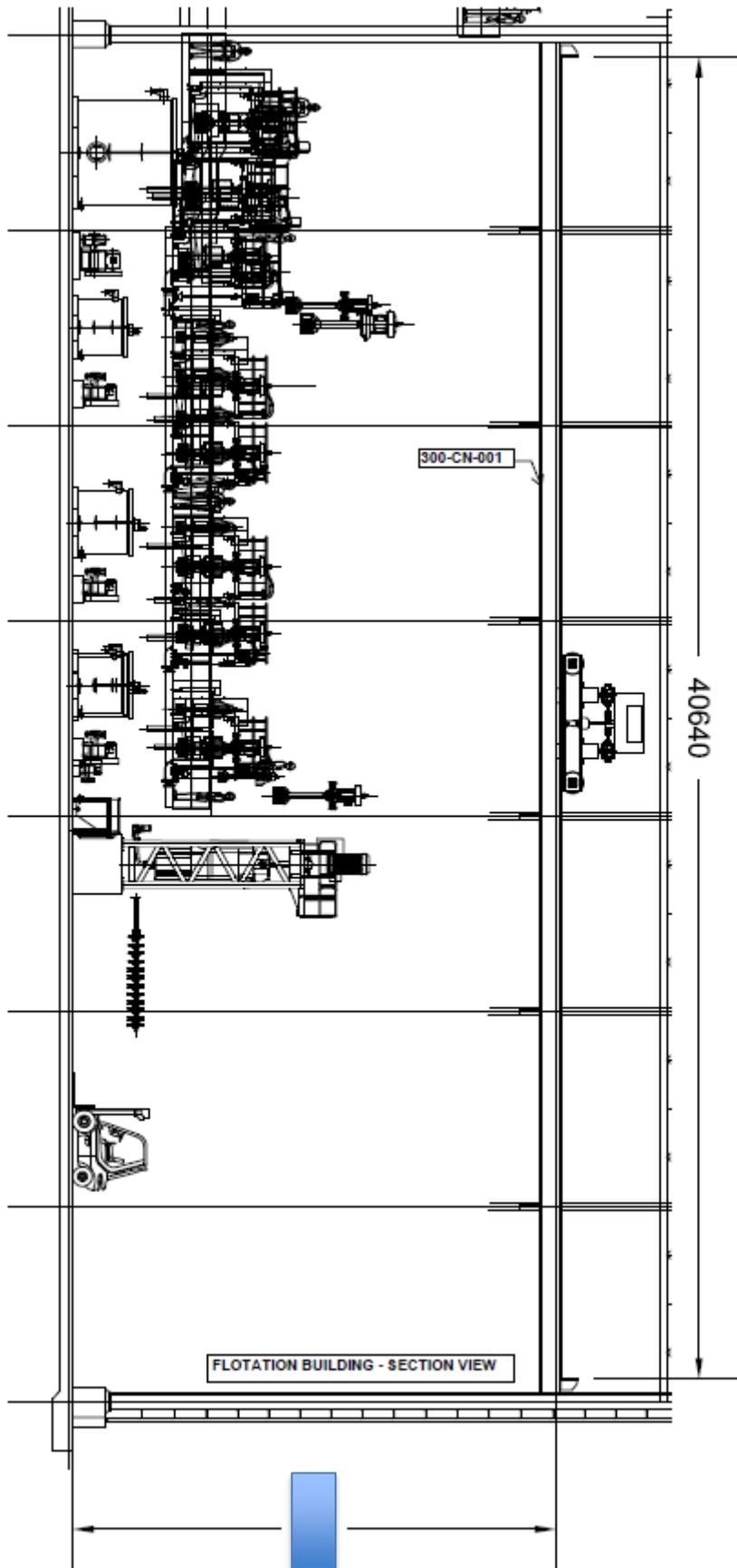
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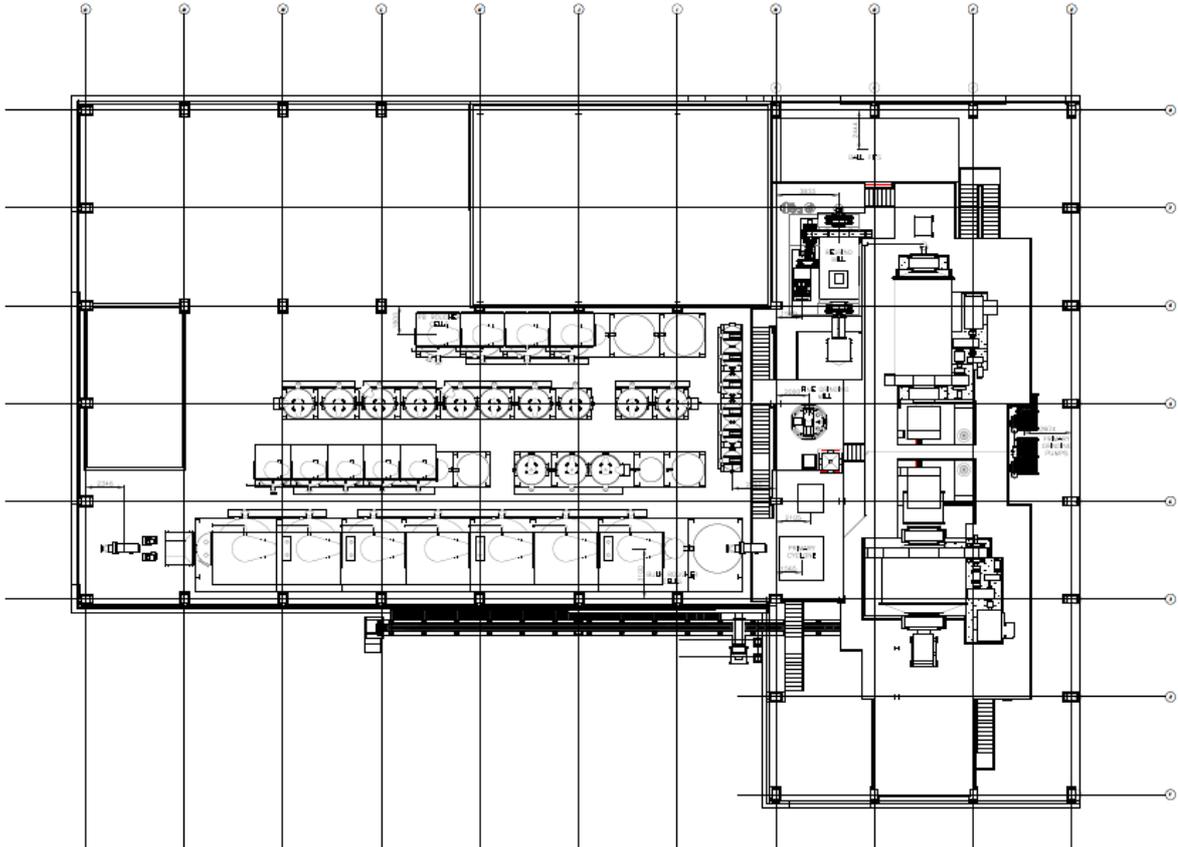


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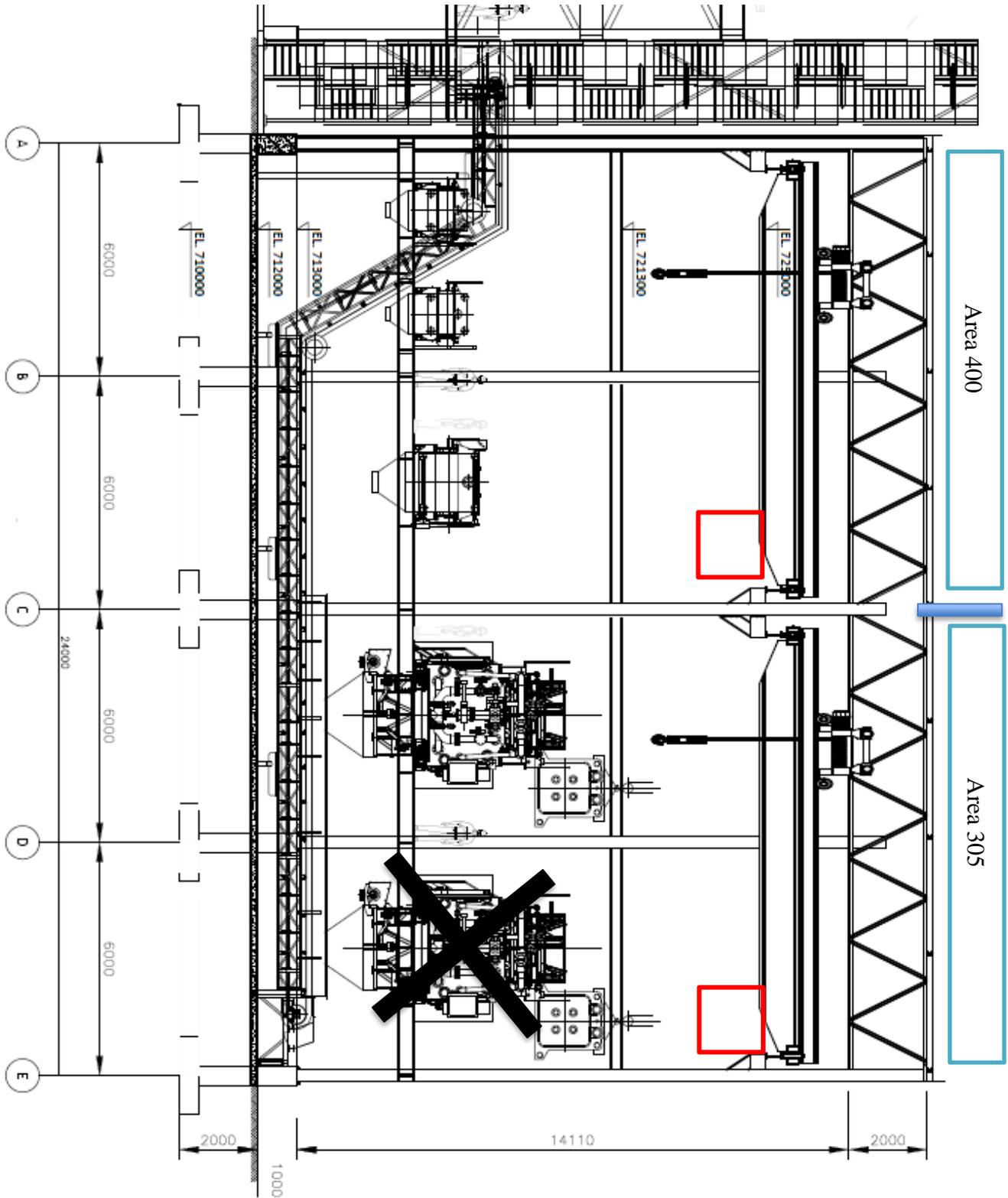
Layout with the hooking point position of the closer equipment to the building columns in grinding and flotation area. (See attachment drawing in .dwg format)



7.3 Data Sheet and Tailing Filtration Building Drawing for Overhead Crane in Tailing Filtration Area

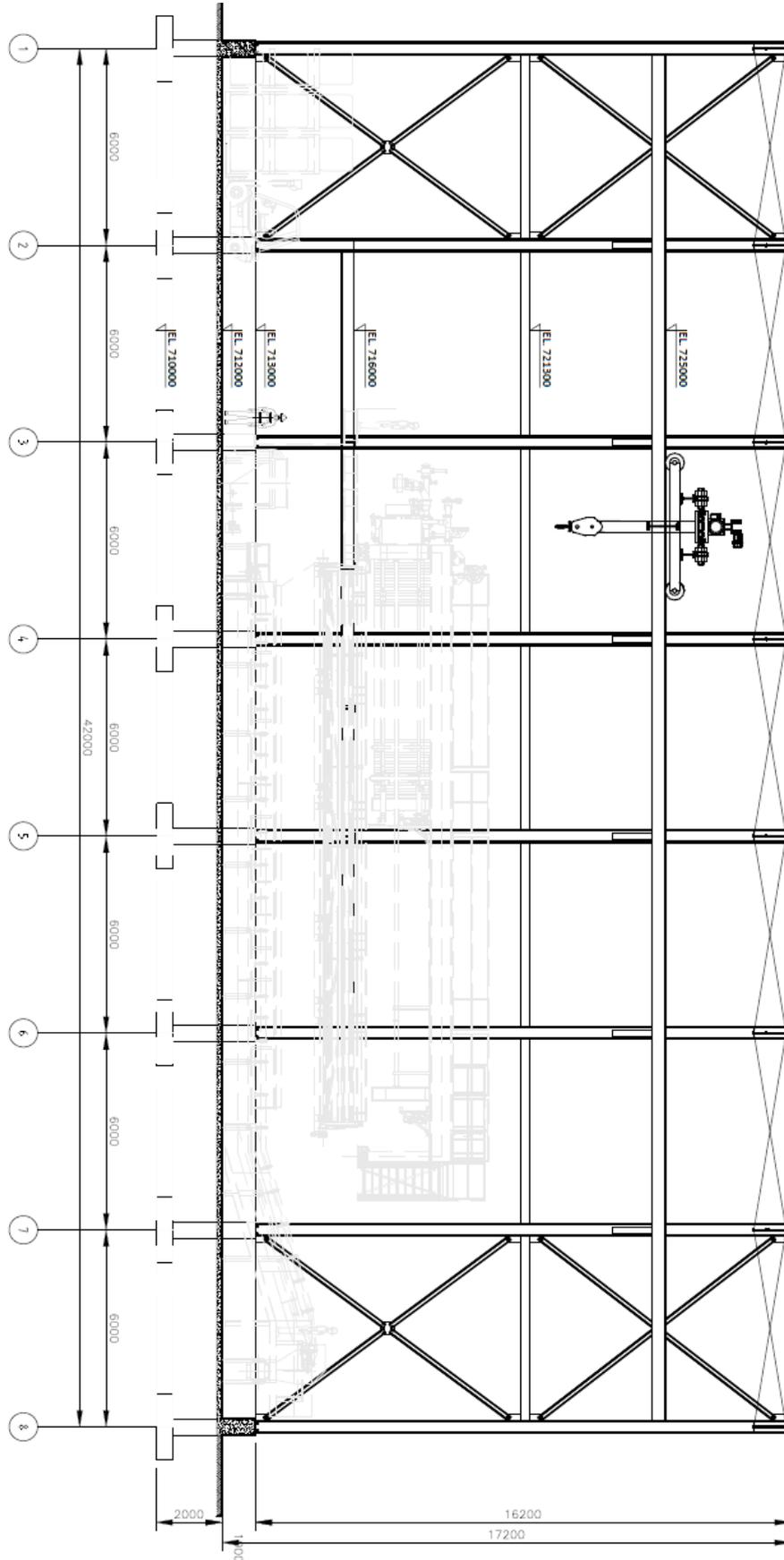
Equipment Description	
Equipment name	Bulk tailing filtration area overhead crane
TAG Number	305-CN-001
Equipment type	Overhead crane
Model	To be determined by supplier
Process Data	
Crane requested for	Bulk Tailings Filtration Building
Heaviest part to lift	5 tons
Requested main lifting capacity	10 tons
Requested Aux. lifting capacity	3 tons
Building size L x W x H	42000 mm x 12000 mm x 15110 mm
Crane area dimensions L x W x H	41050 mm x 11000 mm x 12300 mm
Crane travel	41050 mm
Crane span	11000 mm
Operating conditions	
Plant elevation	750 m above sea
Facility temperature (indoor)	20 °C
Area's operation time	16 h per day / 7 days per week / 52 weeks per year
Area's availability	90% daily target
Electrical power supply for crane	400 V / 3 Ph / 50 Hz

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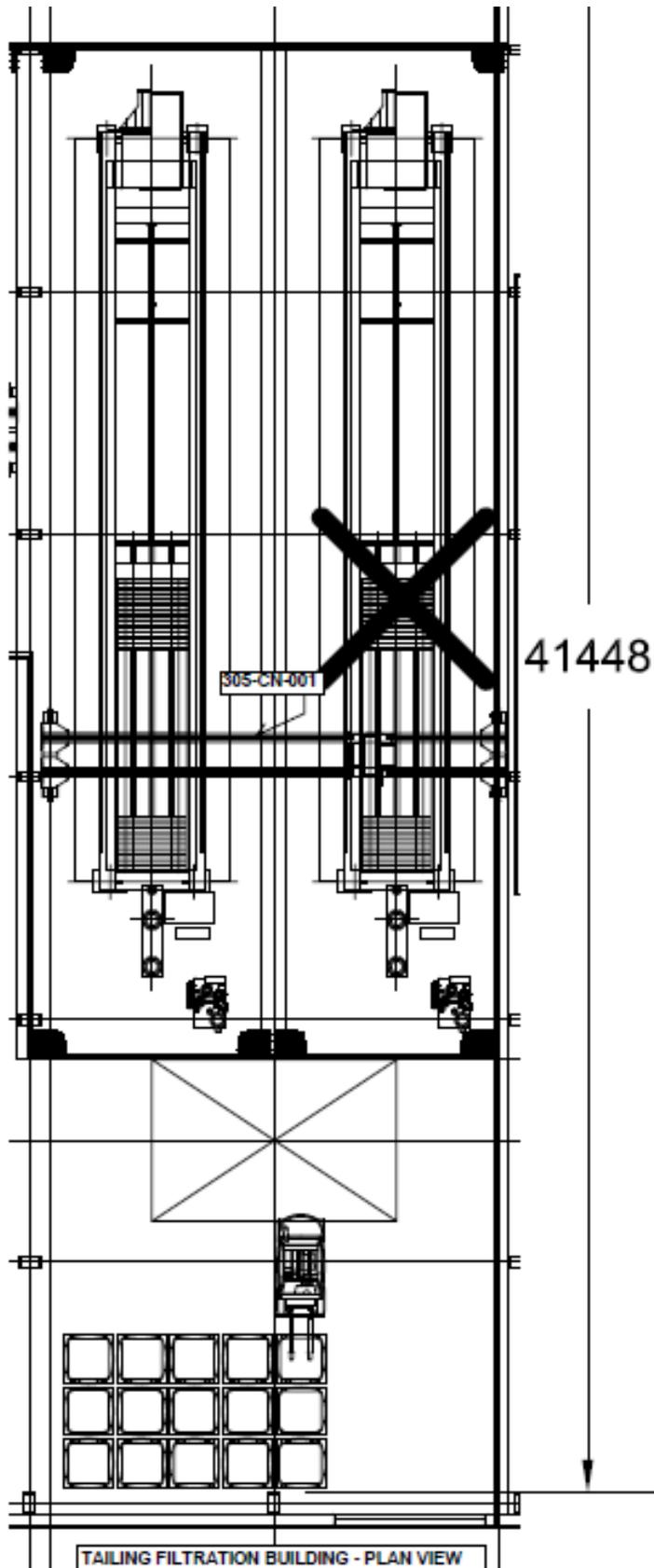


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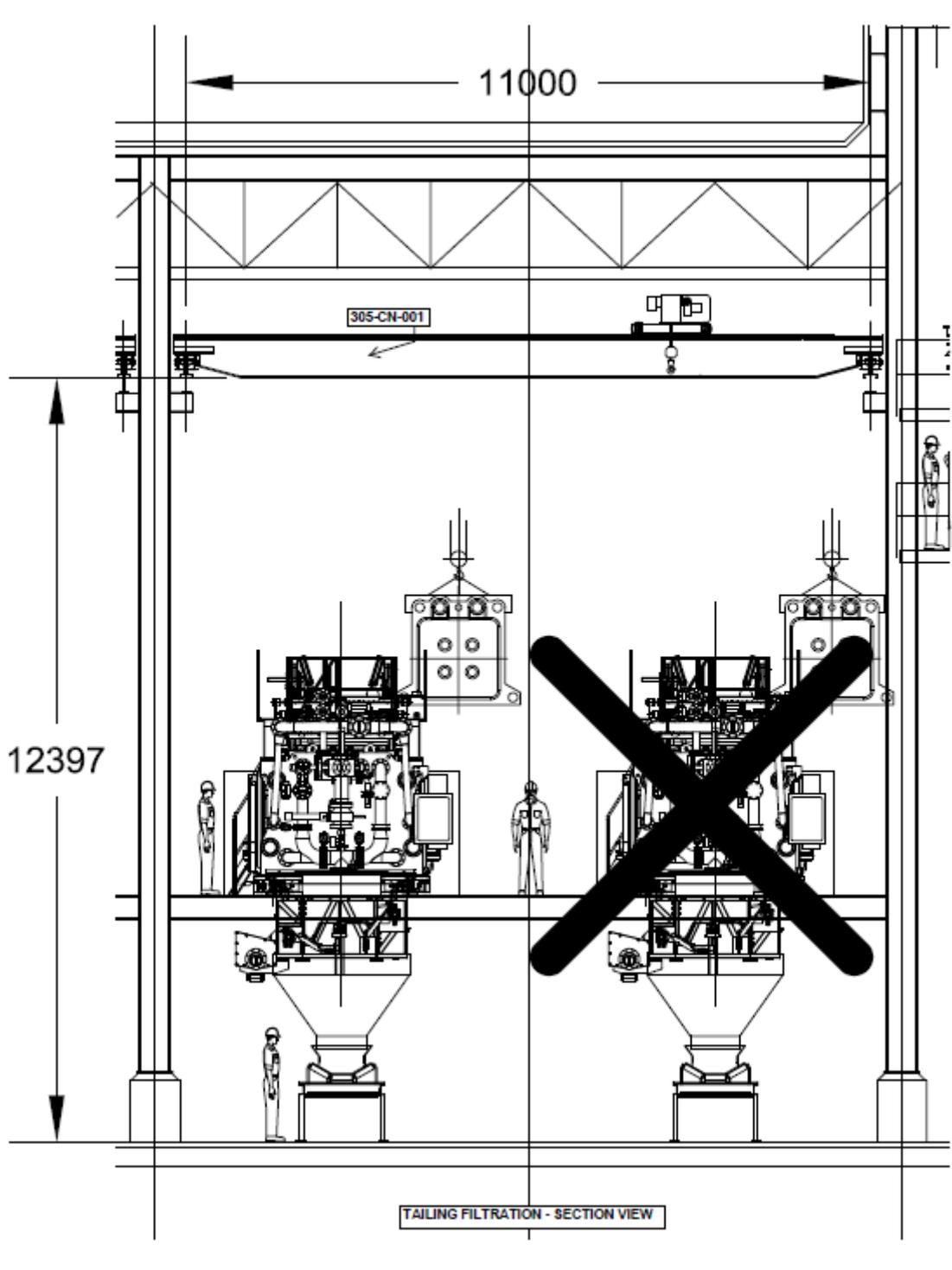
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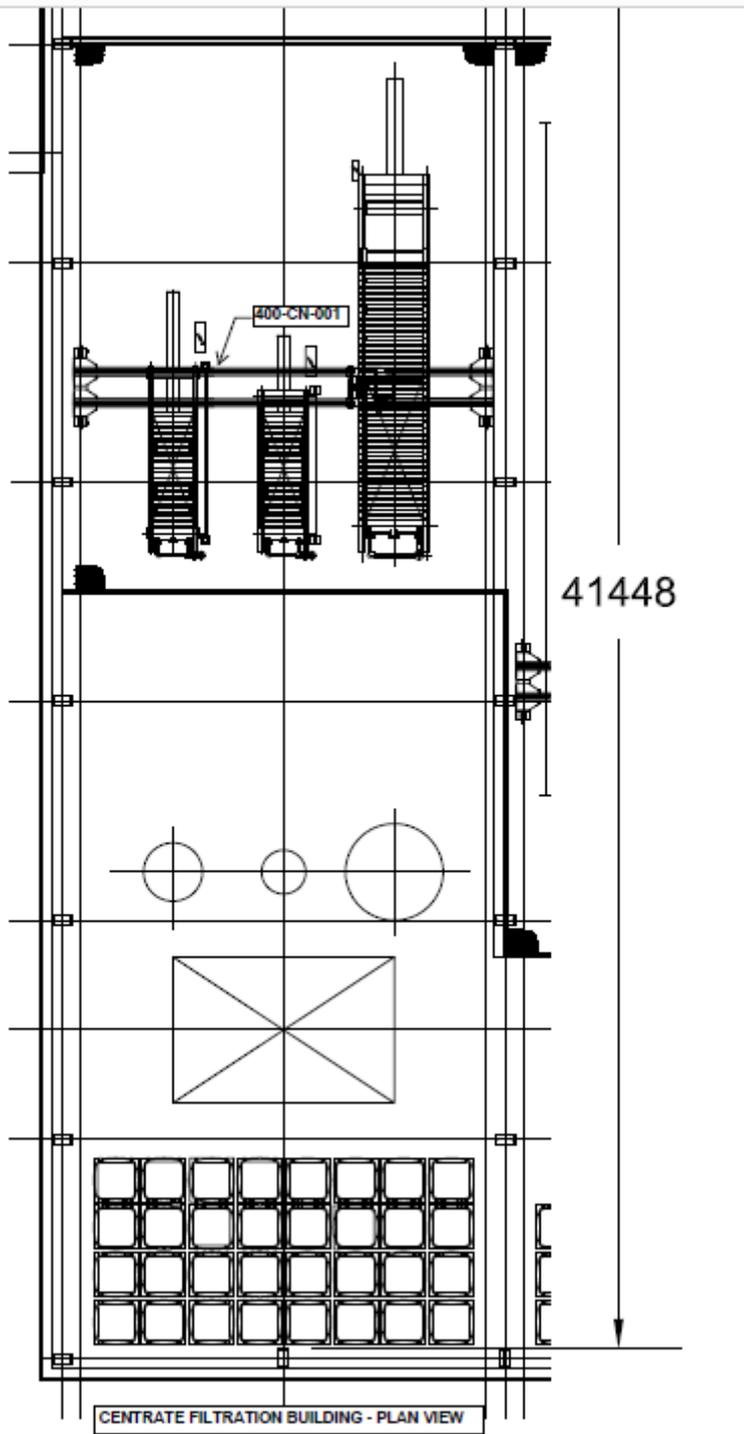
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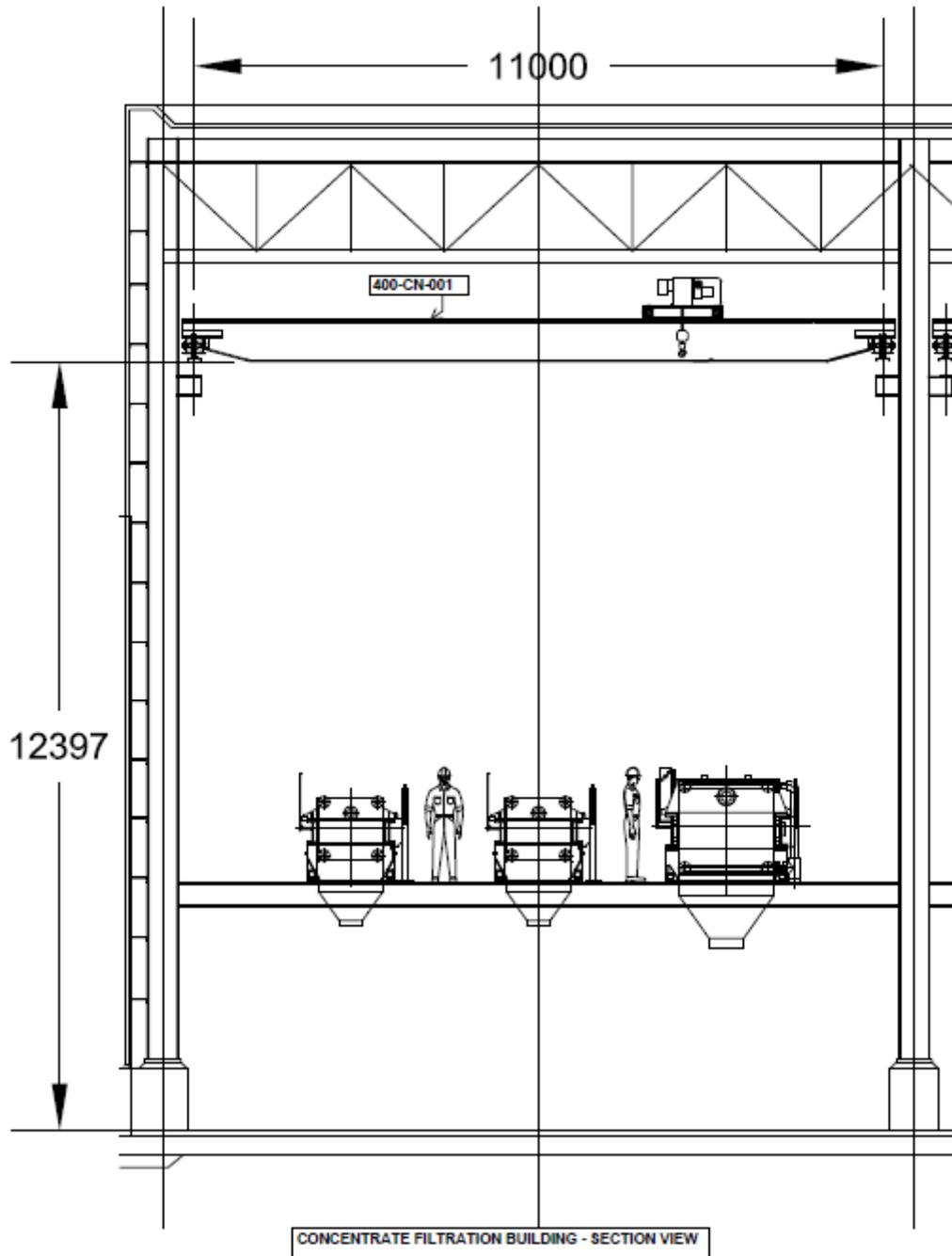
7.4 Data Sheet and Concentrate Filtration Building Drawing for Overhead Crane in Concentrate Filtration Area

Equipment Description	
Equipment name	Zn tailing & concentrate filtration area overhead crane
TAG Number	400-CN-001
Equipment type	Overhead crane
Model	To be determined by supplier
Process Data	
Crane requested for	Zn Tailings & Concentrate Filtration Building
Heaviest part to lift	5 tons
Requested main lifting capacity	10 tons
Requested Aux. lifting capacity	3 tons
Building size L x W x H	42000 mm x 12000 mm x 15110 mm
Crane area dimensions L x W x H	41050 mm x 11000 mm x 12300 mm
Crane travel	41050 mm
Crane span	11000 mm
Operating conditions	
Plant elevation	750 m above sea
Facility temperature (indoor)	20 °C
Area's operation time	16 h per day / 7 days per week / 52 weeks per year
Area's availability	90% daily target
Electrical power supply for crane	400 V / 3 Ph / 50 Hz

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8 WORK EXCLUDED

The following items of work are specifically excluded from the Contractor's Scope of Supply:

- All civil and building works
- Provision of electrical power, water and compressed air

Should the Contractor wish to make any further exclusions this should be highlighted clearly in the Contractor's proposal. Agreement to exclude any further items may be dependent on the Contractor's timely provision of design information required to allow the Purchaser to procure them.

9 ATTACHMENT

Layout with the hooking points position for the equipment which are closer to the building columns in grinding and flotation area. The drawing highlights the dimensions/space between the equipment that are closer to the main structures and the columns alignments. This is to check if proposed cranes can reach those points.

P1384-000-SK-001-1_GRINDING AND FLOTATION PRELIMINARY LAYOUT FOR
OH CRANES REACH.DWG