



**CORPORACIÓN NACIONAL DEL COBRE DE CHILE**

**ADMINISTRATION AND SERVICES MANAGEMENT FOR  
PROJECTS, PROJECTS VICE PRESIDENCY**

**EXECUTIVE SUMMARY**

**PUBLIC PREQUALIFICATION SRM N° 1700001783**

**ENGINEERING, SUPPLY AND SUPERVISORY SERVICES:  
MAIN EQUIPMENT FOR CRUSHING SYSTEM  
PROJECT ANDES NORTE MINA - NEW MINE LEVEL**

**PROJECT VICE PRESIDENCY**

**APRIL 2018**

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## **EXECUTIVE SUMMARY**

### **1. GENERAL BACKGROUNDS**

The Corporación Nacional del Cobre de Chile, Codelco Chile, through the Procurement Management of the Projects Vice Presidency, is carrying out a prequalification process of suppliers for the future acquisition of the asset named "MAIN EQUIPMENT FOR CRUSHING SYSTEM".

### **2. BACKGROUNDS OF SUPPLY**

The New Mine Level - Andes Norte Project (NNM-AN) belonging to the Corporación Nacional del Cobre (CODELCO) El Teniente division, corresponds to the first stage of the deepening process under the current level of transportation Ferrocarril Teniente 8.

The exploitation configuration of the NNM-AN Project presents for its exploitation an infrastructure and services linked to production levels and another one linked to the Ore Management System, which consists of a Crushing System and a Belt Tunnel (TC) that connects the crusher discharge (approximately at level 1,700 m.a.s.l.) with the surface at 1,520 m.a.s.l., at the Caletones Confluence Platform, where the ore is transported via Surface Belts to the Colon Alto Processing Plant.

The non-exhaustive list of supplies considered for the Crushing System is given in Table 1:

**TABLE N°1**

<b>N</b>	<b>TAG</b>	<b>EQUIPMENT DESCRIPTION</b>	<b>Unit</b>	<b>Quant.</b>
<b>1</b>	<b>AREA 3100: PRIMARY CRUSHING</b>			
	03111-APC-001/002	Apron Feeder 120/132" (*) (3150/3.400 mm) width x 30 m length with dribble conveyor. Speed: 0,05 - 0,1 m/s of speed Design Capacity: Wet Equipment 4.400 tph. Drive: Hydraulic. (*) Dimension based on the commercial measure and review of the flow capacity of the equipment according to	Un.	2
	03112-CHP-001	Gyratory crusher type 60" x 89". Design capacity: Wet Equipment 4,120 t/h. Discharge opening (OSS) in the range of 200 mm to 250 mm and accepts a maximum feed size of 45" (1,143 mm).	Un.	1
	03112-PDR-001	Multi-purpose arm with three operating functions (breaking, sweeping, handling) Maximum reach vertical position 7 m, horizontal position 9 m, pedestal swivel angle 265°. Includes claw, hammer and bucket.	Un.	1
	03115-APC-001/002	Apron Feeder 72" width and 8.3 length. Design Capacity: Wet Equipment 4.400 tph. Speed: 0,18 - 0,35 m/s. Drive: Hydraulic. Height of bed 1,300 mm.	Un.	2
	03115-CTR-001/002	84" (2,132 mm) width and 33 m length cleaning belt (between tail pulley CL and drive) Design Capacity: Wet Equipment 4,400. Speed: 0.75 to 1.25 m/s; Height of bed: 400 mm with Picking type idlers and drive using VFD.	Un.	2
	03115-CTR-03	30" (762 mm) wide and 15 m long non-magnetic scrap conveyor belt Design Capacity 1 tph Speed: 0.3 m/s	Un.	1

N	TAG	EQUIPMENT DESCRIPTION	Unit	Quant.
	03115-EIM-001/002	Electromagnets with 60° travel and tilt trolley including support and roller frame for 72" apron feeders	Un.	2
	03115-EIM-001/002	Electromagnets with 60° travel and tilt trolley including support and roller frame for 84" cleaning belts.	Un.	2
	03115-DDM-01/02	Metal detector for cleaning belts (type 03115-CTR-001/002) gantry with beacon, horn, marking system and microprocessor, 177-234 VAC - 15% + 10%, Frequency 48-62 Hz.	Un.	2
	03115-CTR-005/006	Transfer Belt Width (or feeder) of 84" (2131 mm), and 25 m. in length. Speed: 0.25 - 0.5 m/s, drive by VFD Capacity Design: Wet Equipment 4400 tph.	Un.	2
	3115-PES-01/02	03115-CTR-005/006 Transfer Belt Weightometer with a process control range of 0.25% measurement error.	Un.	2

In addition to the supply, the following list of background information (deliverables) will be required:

## 1. Engineering (E: Engineering)

### 1.1 Certified vendor engineering

- ✓ Complete Data Sheet
- ✓ Calculation reports of critical equipment and components as corresponds.
- ✓ General system layout drawings
- ✓ Hoisting drawings
- ✓ Assembly diagrams
- ✓ Load plans for the design of foundations, anchors and adjacent structures (Calculation reports of the support structures in the case of belts and feeders)
- ✓ Circuit plan
- ✓ Single-line diagrams
- ✓ Wiring Diagram
- ✓ Control Diagrams
- ✓ List of electrical loads
- ✓ Complete sets of operating curves (characteristic curves) Instruction manuals, procedures and general information in Spanish, including: Installation, Operation and/or Maintenance Manuals including: Preventive, Predictive, Corrective and Proactive Maintenance Plan and Lubrication Task Plan (if applicable), Parts and Pieces Manuals and Warehouse Maintenance Manuals.

### 1.2 Equipment integration engineering (review by means of mass transfer flows modeling (DEM or equivalent analysis reference), review of dimensions and elevations with the dimensions of the proposed equipment versus the current layout, proposal of conveyor equipment foundations, modeling for the recommendation of selection of process suppressors and dust collectors, reconciliation of protocols and communication strips associated with the system, among others).

#### 1.2.1 Operational Protocols for Pre-Commissioning, Commissioning and Ram-up (PEM).

#### 1.2.2 FAT / SAT / factory pre-assembled tests

#### 1.2.3 Crushing system communications protocols.

## 2. Procurement (P: Procurement)

Manufacture/purchase of supplies (Includes the equipment indicated in table N°1, capital spare parts and special tools for assembly and maintenance, support structures in belts and feeders, access platforms, stairs, railings and others necessary for the completion of the supply and transport to the New Mine Level Project - Andes Norte, located in the mining district of El Teniente, in the pre-Andean foothills, Machalí, Sixth Region of O'Higgins,

approximately 35 km northeast of Rancagua and central coordinates 34° south latitude and 70° west longitude, elevation 2.000 m.

### **3. Technical assistance and On-site supervision services (S: supervision)**

- ✓ Assembly supervision service
- ✓ Pre-commissioning, commissioning and start-up supervision service
- ✓ Training Service for Operation, Maintenance and Assembly and PEM personnel.
- ✓ Operational testing
- ✓ Coordinate and participate in the testing of communication protocols of the central control system for Ore Management (Cash Expense Payment).

### **3. TERM**

The delivery times required for the project are divided into 2 dimensions:

- Vendor Engineering
- Supply of main equipment

The required dates are not defined.

### **4. PREQUALIFICATION OF BIDDING**

This public prequalification of bidders will be carried out taking into consideration the commercial, financial, technical and safety requirements (the latter in case of requiring on-site services), established by the Corporation, for which the participants accept that it will be a reason for disqualification, if the company does not comply with any of the minimum requirements indicated, being able to continue to the next stage only those companies that approve the prequalification process in all its aspects.

The following may participate in the prequalification process:

- Committed companies or consortiums, with working capital and declared assets.
- Companies with the financial capacity to pay the necessary working capital until payment for the products is received (30 days after receipt of the goods by the client), since Codelco does not make any advances.
- Companies with the financial capacity to guarantee: "Faithful Compliance with the Purchase Order" and "Quality and Performance".

In order to start their participation, and in order to be evaluated in this instance, the bidder must complete and submit the following General Background Forms (ANT):

- i. Bidder Individualization ANT01, A-C
- ii. Commercial Prequalification ANT02, A-F
- iii. Financial Prequalification ANT03, A-C
- iv. Technical Prequalification ANT04, A-B
- v. Affidavits ANT05, A-E

In the event that a bidder is not pre-qualified, it will be informed to the e-mail address it has provided as a means of contact at the time of initiating its participation in the pre-qualification process.

**Note: For bidders who have been prequalified by CODELCO's Business Intelligence**

**Directorate, items 4.1, 4.2 and 4.4 are not required.**

#### **4.1 COMMERCIAL PREQUALIFICATION**

Bidders shall submit the following documentation:

- i. Commercial bulletin, not older than 30 days (ANT-02A)

- ii. Tax Debt Certificate (ANT-02B)
- iii. List of pending litigation (ANT-02C)
- iv. Labor Inspection Certificate (ANT-02D)
- v. List of purchase orders in execution (ANT-02E)
- vi. List of executed purchase orders (ANT-02F)

To approve the pre-qualification of commercial aspects, bidders may not have:

- i. Delinquencies on the Commercial Bulletin
- ii. Delinquencies on tax obligations
- iii. Overdue labor and social security obligations

## 4.2 FINANCIAL PREQUALIFICATION

Bidders must submit their Audited Financial Statements for the last three (3) years and signed by the Company's Legal Representative.

Additionally, they must complete with the information of their respective Financial Statements the Excel file called ANT, sheets ANT-03 B and C, in which some financial indexes are automatically calculated.

To approve the prequalification of financial aspects, bidders must comply with the minimum established in the following indices or parameters:

- |  |                                |
|--|--------------------------------|
| i. Debt ratio on Assets in recent years (E)  | $E \leq 2.4$                   |
| ii. Profits last 2 tax years (U)             | $U > 0$                        |
| iii. Last year's working capital (CT) Assets | $CT > 0.15$ amount of business |
| iv. last year (P)                            | $P > 0.85$ amount of business  |

## 4.3 PREQUALIFICATION OF TECHNICAL REQUIREMENTS:

Bidders shall complete the information in the Excel ANT file, sheet ANT 04 and submit the following supporting documentation:

- i. The Company must have the following certifications: Quality and Manufacturing Process Certification ISO 9001 - 2012
- ii. Supplies subject to this prequalification must comply with the following laws and regulations:

### a) Chilean Standards

- a. NCh427 relating to constructions in metal structures
- b. NCh 2369.Of2003 Seismic Design of Industrial Structures and facilities

### b) International Standards

- |          |   |
|----------|---|
| a. AFBMA | Antifriction Bearing Manufacturer's Association |
| b. AGMA  | American Gear Manufacturer's Association        |
| c. AISC  | American Institute of Steel Construction        |
| d. AISI  | American Iron and Steel Institute               |
| e. ANSI  | American National Standards Institute           |
| f. AREA  | American Railways Engineers Association         |
| g. ASCE  | American Society of Civil Engineers             |
| h. ASME  | American Society of Mechanical Engineers        |
| i. ASQC  | American Society for Quality Control            |
| j. ASTM  | American Society for Testing Material           |
| k. AWS   | American Welding Society                        |

l.	BSI	British Standards Institution
m.	FEM	Fédération Européenne de Manutention
n.	IEC	International Electrotechnical Commission
o.	IEEE	Institute of Electrical and Electronic Engineers
p.	IPCEA	Insulated Power Cable Engineering Association
q.	ISA	Instrument Society of America
r.	ISO	International Organization for Standardization
s.	ISO	263
t.	MPTA	Mechanical Power Transmission Association
u.	Mining Safety and Health Administration	
v.	NACE	National Association of Corrosion Engineers
w.	NEMA	National Electrical Manufacturer's Association
x.	NESC	National Electric Safety Code
y.	NFPA	National Fire Protection Association
z.	NHS	National Health Service
aa.	SPI	Society of Plastic Industry

- iii. To prove that it has successfully supplied this type of equipment (table N°1) to the national and/or international underground mining industry.
- iv. To verify that the technical service has the suitable personnel and adequate technical resources to provide services in underground mining.
- v. Make sure that the training programs are carried out according to the client's needs, clearly indicating the success cases and the methodology used to achieve this.
- vi. To verify that the organization to be considered is adequate to the requested technical scope, in terms of communications, use of technical and human resources, responsibilities and roles of the local office and headquarters.
- vii. Identify the manufacturing facilities used in the delivery of similar assets in other projects.
- viii. To verify that we have experience in the document management required in this type of delivery, pointing out experiences from other projects.
- ix. To verify that there is experience in the construction support services required for this type of delivery, pointing out experiences from other projects.
- x. To verify that there is experience in the application of a quality management system required in this type of delivery, pointing out experiences from other projects.
- xi. To verify on the basis of data from other projects the availability and use indicators achieved in equivalent equipment.
- xii. To verify having the main equipment (Crusher and Apron Feeder) in your production line and that they do not correspond to prototype equipment.
- xiii. Make sure that the supplied equipment will have spare parts for at least 10 years from the start of the operation.
- xiv. To verify that there are no patent problems or pending property rights litigation at this time, you must provide certified information.
- xv. Product failure warranty for at least 18 months of operation.
- xvi. Perform after sales services of: Qualified and experienced technical assistance to support the assembly and installation of equipment on-site, technical assistance for the commissioning of equipment on-site, on-site training services, maintenance services and repairs of equipment on-site, 24-hour call center.
- xvii. The supplier must have in its organization the necessary specialist personnel to guarantee the correct elaboration of the engineering deliverables and all the necessary management in relation to the coordination and integration of outsourced engineering deliverables (sub-vendors).

**In order to approve the prequalification of the technical aspects, bidders must comply with all the requirements previously indicated.**

## **5. PARTICIPATION IN FUTURE BIDDING PROCESS**

This prequalification will entitle the supplier to participate in a potential bidding process that the Projects Vice President may develop in the future.

Will be able to participate those domestic or foreign companies that meet the following requirements:

- Comply with all the aspects indicated in point 4 of this document.
- To be aware of and comply with all the requirements established by the legal provisions in force for the delivery of the supply subject to the bidding.
- Comply with Chilean health, safety and environmental regulations.

Additionally, CODELCO will require compliance with its internal rules and regulations, which will be delivered to prequalified companies when they are invited to a specific bidding process.

## 6. PUBLIC PREQUALIFICATION CALENDAR

Activity	Place	Date Start	Date final	Hour
Publish Pre-qualification Call	Codelco Web Site	04/04/18	04/04/18	During all day
Communicate intention of participating	Via email <a href="mailto:precalificacion.dap@codelco.cl">precalificacion.dap@codelco.cl</a>	04/04/18	09/04/18	Until 01:00 pm.
Publication in SRM of pre-qualification process to companies that confirm their participation	Purchasing Portal N° 1700001783	10/04/18	10/04/18	During the afternoon
Receipt of Prequalification Backgrounds	Purchasing Portal N° 1700001783	10/04/18	20/04/18	Until 07:00 pm.
Result of Prequalification	Via email to the supplier's contact email		Until 24/04/18	



## **7. CODELCO PURCHASING PORTAL AND REGIC:**

In order to participate in this pre-qualification process, companies must be registered in:

i. REGIC Register of Providers.

For carrying out the registration in REGIC, the transnational must enter to:

<https://www.regic.cl/registracioncodelco/>

In case of queries or doubts on the registration and use of REGIC, the company must communicate from Monday to Friday between 09:00 am and 06:30 pm, directly through the website [www.achilles.com/chile](http://www.achilles.com/chile), to email: [chile@achilles.com](mailto:chile@achilles.com) or to (+562) 2585 9600.

Once the REGIC registration process has begun, the company must request in its confirmation of participation email in this pre-qualification, a provisional registration for 30 days for CODELCO's Purchasing Portal platform.

ii. CODELCO Purchasing Portal

In case of queries or doubts about the access and use of the Purchasing Portal, the company must communicate from Monday to Friday between 8:30 am and 07:00 pm, directly to: [portalcompras@codelco.cl](mailto:portalcompras@codelco.cl) or to (+562)2818 5765.

## 8. CONFIRMATION OF INTENTION OF PARTICIPATING

For confirming its participation the company shall be sent one email to: [precalificacion.dap@odelco.cl](mailto:precalificacion.dap@odelco.cl), attaching:

- i. Copy of this Summary of the Prequalification Process, signed by its Legal Representative, in sign of acceptance of the terms and conditions set forth in this document.
- ii. The following complete information table:

<b>Company ID</b>	
<b>Business name</b>	
<b>Address</b>	
<b>Commune</b>	
<b>City</b>	
<b>Country</b>	
<b>Phone</b>	
<b>Contact Name</b>	
<b>Contact Position</b>	
<b>Contact Email</b>	
<b>Contact Phone</b>	

## 9. INTENTION OF PARTICIPATING

Santiago, \_\_\_\_ April, 2018

Sirs Project Vice Presidency - CODELCO Ref.:  
Prequalification Process N° SRM **1700001783**

Dear Sirs:

By this letter, I

ID: \_\_\_\_\_, as legal representative of the Company, Company \_\_\_\_\_,  
Name \_\_\_\_\_ and ID \_\_\_\_\_.

**confirm that the represented company will participate in the pre-qualification process of reference.**

I further declare that I know and accept the following:

- That this pre-qualification does not in any way guarantee the award of a purchase or service.
- That all the information provided for CODELCO to evaluate this pre-qualification is true, therefore, otherwise CODELCO will be able to take the measures that its internal regulations and the law authorize it.
- That the mailing address indicated on ANT01-A form is the one that our company has designated for this purpose. We commit, therefore, to timely inform the Corporación Nacional del Cobre de Chile, any changes occurring, being our sole responsibility to update this information when necessary.
- That the only way to communicate with CODELCO is to:
  - Inform our intention of participating is the mail:
  - [precalificacion.dap@odelco.cl](mailto:precalificacion.dap@odelco.cl)
  - Submit all the information requested in this pre-qualification is Codelco Purchasing Portal, with the process identified by the number: SRM 1700001783.

In addition, we hereby inform CODELCO that all expenses incurred by related with this pre-qualification process are at our sole expense.

\_\_\_\_\_  
Company Name:  
Company ID:  
Name of the Company Representative: