

## MAGALDI INDUSTRIE

### Budget proposal

#### ***Magaldi Ecobelt (ECO)*** **MIDWEST VANADIUM**



***Client:*** ***MIDWEST VANADIUM Pty Ltd***  
***Plant:*** ***WINDIMURRA VANADIUM plant (Australia)***  
***Proposal:*** ***MI 2012.0040 REV0***  
***Date:*** ***May 09<sup>th</sup>, 2012***

## TABLE OF CONTENTS

1	COVER LETTER .....	3
2	TECHNICAL DESCRIPTION .....	4
2.1	General .....	4
2.2	Equipment features .....	4
3	SCOPE OF WORK.....	6
3.1	Project information .....	6
3.2	Scope of Work .....	6
3.3	Equipment Data Sheet.....	7
4	SCOPE OF SUPPLY .....	8
4.1	Magaldi Ecobelt .....	8
4.2	Exclusion.....	9
4.3	Technical Documentation .....	9
4.4	Fabrication .....	9
4.5	Warranties .....	10
5	COMMERCIAL TERMS .....	11
5.1	Introduction .....	11
5.2	Quotation for Magaldi Ecobelt (ECO).....	11
5.3	Price Adjustment .....	11
5.4	Terms of Payment .....	11
5.5	Taxes, duties, levies .....	12
5.6	Terms of Delivery .....	12
5.7	Validity of proposal .....	12
5.8	Warranty .....	12
5.9	Confidentiality.....	13

## **1 COVER LETTER**

---

Dear Sir,

First of all thank you for your kind availability to proceed with this budget proposal.

We are pleased to submit our Proposal for a the Magaldi Ecobelt® dust proof steel pans conveyors for the haematite transportation including the automatic fine recovery system Magaldi O-Chain.

At this stage of the proposal we are providing a Budget price for the sole Magaldi Ecobelt® conveyor, we would be glad to proceed with a firm and final layout of the project. A site survey and the release of a final layout has been also quoted in this proposal.

Should you have any questions, or need any additional information, please do not hesitate to contact us at your convenience.

We look forward to having the opportunity to work with you soon on this project.

Sincerely Yours,

***Alberto Lalia***

## 2 TECHNICAL DESCRIPTION

### 2.1 General

The present proposal is covering the engineering, manufacturing and supply of the new Magaldi Ecobelt.

**The aim of this proposal and of its attached documents is to provide basic information about the Magaldi Ecobelt system both from a technical and economical point of view.**

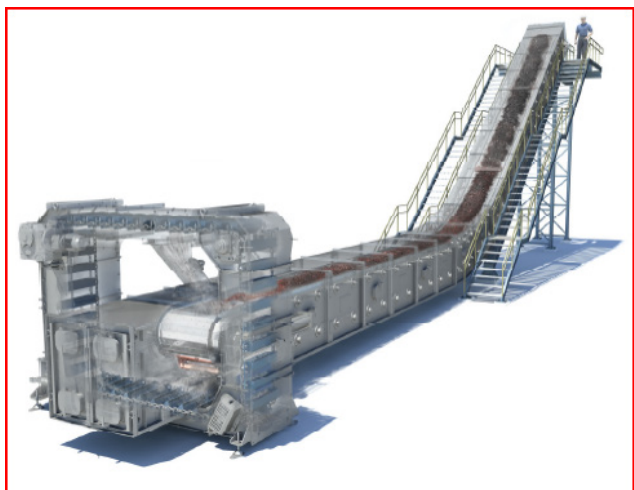
The Magaldi Ecobelt conveyor system will give the following advantages:

- **Safe and reliable material transportation.** Thanks to the Ecobelt<sup>®</sup> technology both safety and reliability issues are solved.
- **Gentle and smooth material transportation.** The quality, shape and size properties of the transported material remain unchanged; no fines are generated during the transport.
- **Environmental friendly.** The steel housing will be fitted with special air-tight gaskets to prevent dust dispersion to the environment;
- **Low O&M costs and easy&safe operation.** Its simple design strongly reduce operating and maintenance costs and its environmental-friendly concept allows to safely and cleanly work for years;

### 2.2 Equipment features

The Magaldi Ecomag conveyor is a totally enclosed mechanical conveyor.

The Magaldi Superbelt<sup>®</sup> is enclosed inside the Ecomag external casing that is completely sealed, thus preventing any uncontrolled infiltration of air from the ambient, and in the same time preventing any leakage of ash or gas to the outside. The Ecomag is also including a dust recovery system (scrapers) installed on the Magaldi Superbelt<sup>®</sup>, bringing back dust on the floor of the conveyor casings and recovering it.



The Magaldi Superbelt<sup>®</sup> is the ideal conveyor for handling very abrasive and hot materials, aggressive chemicals, heavy or sharp products, ensuring a safe and environmental friendly operation.

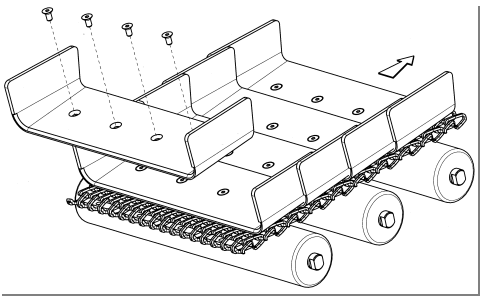
The Magaldi Superbelt<sup>®</sup>, the steel belt successfully used to convey difficult materials in industries where high dependability is essential, overcomes the frequent problems encountered by conventional conveyors, as

rubber belt, drag chain and apron conveyors. Sudden failures or necessity for repairs of conventional conveyors can frequently lead to production losses or high O&M costs.



The Magaldi Superbelt<sup>®</sup> allows to convey extremely hot, dusty, sharp, abrasive materials, no matter if containing fines or lumps, over long distances and with steep inclinations.

High temperatures and tear issues are solved thanks to the patented method of connecting the pans to the mesh belt, that leaves all elements free to expand in any direction without permanent deformation. Wear is negligible, since material is slowly conveyed with no relative motion against steel parts. Power demand for conveying and noise are at the minimum levels. In most cases the Magaldi Ecobelt<sup>®</sup> operational life exceeds 10 years.



### 3 SCOPE OF WORK

---

#### 3.1 Project information

The Magaldi Ecobelt conveyor will be used for the transportation of the hot hematite.

The Ecobelt system will be consisting in a special dust proof conveyor fitted with a mechanical self-cleaning device to remove the fine residuals from the bottom of the casing.

Fine dust, which eventually may deposited on the bottom of the Ecobelt® conveyor casing is recovered and carried back through the Magaldi Spill-Chain, a dedicated compact fines recovery conveyor.

#### 3.2 Scope of Work

**One (1) Ecobelt® conveyor including:**

- One (1) Superbelt® conveyor
- One (1) Magaldi O-Chain
- Electric drives for Magaldi Superbelt and Magaldi O-Chain, comprising of:
  - Asynchronous three-phase electric motor (50 Hz, 440 V, 3 phases plus neutral/hearth)
  - Reduction gear
  - Mechanical joint
  - Safety guard
- Take-up devices for Superbelt® and O-Chain

### 3.3 Equipment Data Sheet

#### Equipment data sheet.

**Magaldi Ecobelt**

**Model : ED4.AC.1205.255/S**

**Item : ECO.01**

Description	Data	U.M.	Notes
-------------	------	------	-------

#### Material characteristics

Material	Hematite		
Bulk density	2,6	t/m3	
Material maximum size	200 (most 50)	mm	
Angle of repose	30	°deg	
Max Temperature	450	°C	
Moisture content	0	%	
Abrasivity	high		
Max Temperature	450	°C	
Corrosive	none		
Toxic	none		
Dusty	low		
Explosive	none		

#### Technical data

Magaldi Superbelt type	<b>ED4.AC.1205.255/S</b>		
capacity	160	t/h	to be confirmed
speed	0,15	m/s	
RPM at head drum shaft	6,17	rpm	
absorbed power	4	kW	
installed power	5,1	kW	Preliminary. 50 Hz, 440 V, 3 phases + neutral/earth
belt operation	24	h/d	

#### Equipment construction data

useful width of the belt	1.200	mm
head drum diameter	620	mm
tail drum diameter	600	mm
upper idler diameter	102	mm
upper idlers pitch	500	mm
lower roller diameter	90	mm
lower roller pitch	500	mm

## 4 SCOPE OF SUPPLY

### 4.1 Magaldi Ecobelt

#### **Magaldi Ecobelt**

**Model : ED4.AC.1205.255/S**

**Item : SUP.01**

Code	Unit.	Q.ty	Description	Note
------	-------	------	-------------	------

#### **Head section consisting of:**

- n°* 1 Frame
- n°* 1 head drum
- n°* 2 Supports including bearing

#### **Tail section consisting of:**

- n°* 1 Frame
- n°* 1 Tensioning trolley
- n°* 1 tail drum
- n°* 2 Supports including bearing
- n°* 1 Tensioning device Hydraulic

#### **Intermediate sections consisting of:**

- m* Intermediate frame
- n°* upper idler assembly OMEGA type
- n°* lower roller assembly DR type
- n°* safety roller assembly PS type

#### ***m* 62,8 Superbelt belt (in sections of 4 meters each):**

- n°* 1 assembly kit

#### **Drive**

- n°* 1 Electric motor
- n°* 1 Gearbox
- n°* 1 Mechanical joint

#### **Accessories included in our supply**

- n°* 1 J-box
- n°* 1 Magaldi O-Chain
- n°* 1 Zero-speed switch
- n°* 2 Emergency switch

**Total estimated weight of equipment Kg: 41.000**



## **4.2 Exclusion**

- Measurements on site
- Assembly on site
- Assembly assistance
- Start-up assistance
- Electric wiring
- Connections with the existing equipment
- Supporting structure
- Civil, foundations and anchor bolts
- Local fee and taxes
- Anything that is not expressly specified in our scope of supply.

## **4.3 Technical Documentation**

The technical documentation to be sent with the supply, is the following:

### **4.3.1 Drawings**

Lay-out of the equipment of our scope of supply.

### **4.3.2 Spare parts**

Spare parts list with the installed and suggested quantities for over two years of operation.

### **4.3.3 Manuals**

Use and maintenance manuals of the equipment of our scope of supply.

### **4.3.4 Other**

Loads transmitted from standard supports to the foundation plates.

## **4.4 Fabrication**

### **4.4.1 Standards and reference rules**

Engineering of mechanical parts according to European standard rules.

Construction of the mechanical parts according to European standard rules.

Drive according to the following rules:

- electrical characteristics: CEI 2.3 - 2.7 (IEC 34.1)

### **4.4.2 Painting**

The frame, if it is not differently specified by the client, is supplied with our standard paint finish:

- Blasting with finishing grade Sa 2.5;
- Epoxyphenolic Coating (Jotun EpoxyHR) 2 coats 300 micron thickness.

## **4.5 Warranties**

### **4.5.1 Mechanical guarantee**

Magaldi warrants that all equipment will be free from defects in material and workmanship for a period of 18 months from the date of shipment.

Magaldi shall have no liability for normal wear.

In case of claims Magaldi Industrie reserves the right to make inspections on site or to require the return of defective parts that the client will send directly to our workshop in Buccino (SA).

In case that the inspection reveals the damage has been caused by material, working or engineering defects during warranty period, Magaldi Industrie will repair or replace the defective parts at his charge on an ex works basis.

### **4.5.2 Functional Guarantee**

Magaldi Industrie warrants the working ability and capacity of the supplied equipment, as described in the "Technical sheets", on condition that they are utilized for the purposes defined at the time of this proposal.

## 5 COMMERCIAL TERMS

### 5.1 Introduction

The prices given in this quotation include the scope of supply as defined in par. 4.1

### 5.2 Quotation for Magaldi Ecobelt (ECO)

Pos.	Description	Total Price
1.0	Magaldi Ecobelt type <b>ED4.AC.1205.255/S</b> as described at paragraph 4.1 (SCOPE OF SUPPLY) of our proposal"	<b>398.000,00 €</b>
1.1	CIF Perth port with sea freight shipment (delivery of 11 weeks from order acceptance)	<b>Included in pos. 1.0</b>
A	Option CIF Perth airport with air freight shipment (delivery of 6,5 weeks from order acceptance)	<b>173.000,00 €</b>
2.0	Site survey for measurement and additional basic engineering (including accommodation and travel expenses off 2 engineers for 2 working days )	<b>44.000,00 €</b>

### 5.3 Price Adjustment

Any changes in design criteria and/or in scope of supply may imply a price adjustment.

### 5.4 Terms of Payment

- (A) ADVANCE PAYMENT:** 20% of the total contract price at Purchasing Order signature by direct cable remittance to Magaldi Industrie S.r.l. account within 15 days from invoice date.
- (B) ENGINEERING:** 10% of the total contract price at delivery of the following engineering documentation:

General arrangement drawings;  
Cross sectional drawings;  
Data Sheets of the equipment;  
Arrangement drawings;

P&I Diagrams;

**(C) DELIVERY:** 70% of the total contract price pro-rata at Magaldi Industrie S.r.l. notice of material readiness.

Payments for amount **(B)** and **(C)** shall be done by irrevocable, non transferable, Documentary **Letter of Credit** through a First Class International Bank confirmed by an Italian bank chosen by Magaldi Industrie S.r.l. The Letter of Credit will be opened by Client in favor of Magaldi Industrie S.r.l. within thirty (30) days from the coming into force of the Contract (at the reception of payment (A) and payable at sight against presentation of transport documents.

The Letter of Credit (whose text is enclosed to this proposal in para.4.9) will expire not earlier than three (3) months after scheduled final delivery date. Opening and confirmation expenses of L/C at Client charge.

### 5.5 Taxes, duties, levies

The prices indicated in this offer are indicated in Euro currency and are to be considered net of any current or future taxes including VAT, duties, levies, interest payments, movement of goods, personnel or corporate income taxes or other charges (no matter what type) arising subsequent to delivery levied by the Government and/or Authorities in the Customer's country.

### 5.6 Terms of Delivery

The delivery of the equipment is as follows:

**Option 1.1 (Included):** 11 weeks CIF Perth port (Australia) from advance payment (see par. 5.4);

**Option A:** 6,5 weeks CIF Perth airport (Australia) from advance payment (see par. 5.4).

All trade terms provided in this Proposal shall be interpreted in accordance with the year 2010 version of INCOTERMS, as published by the International Chamber of Commerce, Paris France.

### 5.7 Validity of proposal

This proposal is valid for 30 days from the date of its issuance (*see cover page*).

### 5.8 Warranty

Subject to the terms herein below set forth, Magaldi Industrie S.r.l. warrants to the final customer:

(a) that all equipment manufactured and sold by Magaldi Industrie S.r.l. will be free from defects in material and workmanship, and;

(b) that any dry slag removal system designed by Magaldi Industrie S.r.l. and sold hereunder will perform in accordance with Magaldi Industrie S.r.l. specifications for such system set forth in defined power plant.

Said warranties to run for a period equal to the lesser of twelve (12) months from the date of start-up of operation of such equipment or system, respectively, or eighteen (18) months from the date of shipment or notice of material readiness.

If system does not perform as specified Magaldi Industrie S.r.l. will supply the required components, that Magaldi Industrie S.r.l. has determined to be required, to resolve the problem. Labor to install the components is to be by Customer. If equipment is to be returned to Magaldi Industrie S.r.l. the refund is to be based on the condition of the equipment upon return. Cost for removal of the equipment and return freight is to be paid by Customer.

Wear Parts are no subject to any life warranty, since the behaviour of dry slag is depending from many parameters, and without a sample of it, it will not be possible to make any assumption.

The Guarantee will not be considered applicable if our commissioning engineer will not complete all equipment checks at the job site.

The commissioning of the system may only be performed by our trained technicians who are able to optimise the system performance for best material velocity and lowest air consumption. Our technician will also ensure that the installation of the system is in accordance with our instructions.

Accordingly the system is unable to function without the attendance of our commissioning engineer who ensures that the terms of the system guarantees are preserved.

## **5.9 Confidentiality**

In the event that a contract is awarded to others for all or any segment of the work which is the subject of this proposal, this proposal remains the property of Magaldi Industrie S.r.l. (MI) and all copies must be returned to MI within fifteen (15) days of award of the contract to others.

This proposal is provided on a confidential basis to the specified addresses and shall not be shown to anyone outside of his organization without the written permission of MI.

Any agreement which may ensue as a result of MI's offer is subject to approval of the MI Director. Basic engineering included in this proposal must be considered applicable only for this project and therefore not usable for other or future applications.