

# CASE

# STUDY

## Coal Underground Mine Hoist Huaibei Mining Industry (China)



### Applications:

**Metals:** Mill stands, winders, pumps, fans.

**Marine:** Main propulsions, thrusters, pumps and compressors, dredgers.

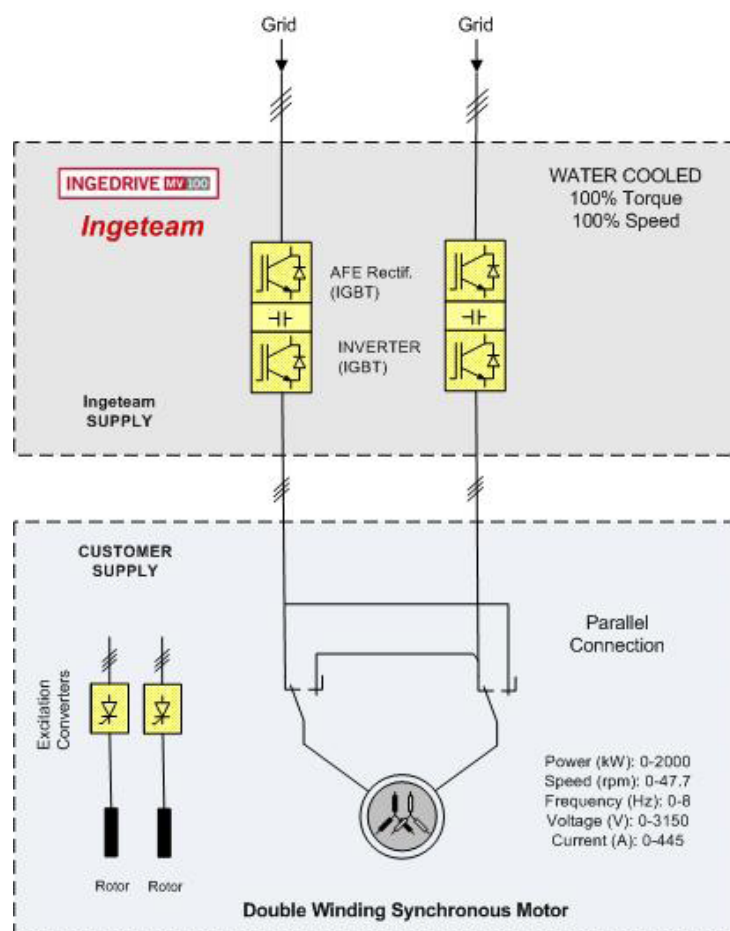
**Oil & Gas:** Drillings, pumps, compressors, blowers. Water,

**Wastewater and Power Generation:** Fans and pumps.

**Cement, Mining and Minerals:** Mine hoists, grinding mills (SAG mills, ball mills, etc.), conveyors, crushers, fans

In April 2012, the Chinese company Shanghai Hualing awarded Ingeteam a contract for the design and supply of the main frequency converter for a mine hoist to be installed in Tongting, Anhui province, China. Shanghai Hualing is an electrical system integrator that delivers projects mainly in the mining sector.

Ingeteam never lets you down



Converter type  
Rectifier  
Inverter  
  
DC-Bus system  
Cooling method  
  
  
Type  
Hoist characteristics

## Scope of Supply

Project management  
Basic and detailed engineering  
Equipment supply: Redundant Ingedrive MV100 converter  
Commissioning  
After sales services (360°CRS)

## Technical Features

### Ingedrive MV100

Fully-regenerative Active Front End (AFE) type, based on HV-IGBT, 3-level NPC topology  
Totally controlled HV-IGBT bridge, 3-level NPC topology, using PWM modulation techniques based on voltage vectors

Consisting of high-capacity long-life polypropylene capacitors  
Water cooled with redundant set of pumps with water heat exchanger

## Other Features

### Multi-rope friction hoist

Shaft diameter: 2800 mm  
Hoist distance: 586,5 m  
Hoist capacity: 12 tn  
Max. speed: 9,96 m/s

## Redundant MV drives for mine hoists

**INGEDRIVE MV**

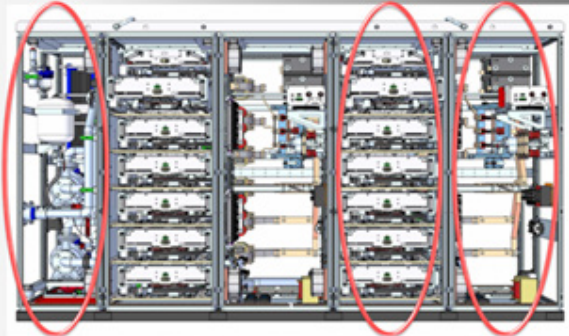
**Ingeteam**

### Water cooled version

Single cooling  
unit with  
redundant pumps

AFE  
+ Inverter  
+ OVLU

Input and Output terminals  
+ dv/dt filters  
+ motor grounding switch



#### Introduction

Operation

Modes

Control

Solution

Features

Comparison

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