



## Case study LKAB

Power and productivity  
for a better world™



# LKAB. Providing fresh air.



## The client

Numbering around 4000 employees, LKAB is the largest producer of processed iron ore in the European Union. Untypically for the industry, the ore is extracted from deep underground mines, at Kiruna and Malmberget, in the north of Sweden. Every day, the amount of iron ore extracted from the Kiruna and Malmberget mines is enough to provide steel for almost six-and-a-half Eiffel Towers. When mining at depth, good working conditions are crucial, effective ventilation being a priority. When conventional contactors in the ventilation system failed due to long cablings, LKAB turned to ABB for a solution.

## The challenge

Power for the fans and ventilation systems at the Kiruna and Malmberget mines is transmitted by cable, some stretching for up to 400 meters. Voltage fluctuations due to these long cables sometimes caused failures when the original conventional contactors welded shut, causing stoppages. To ensure the best working condition for their miners, LKAB turned to ABB for a solution.



# 7000 Tons

That's the weight of extracted iron from the Malmberget mine every day. You can compare that with six-and-a-half Eiffel towers.



## The ABB solution

Working closely together, LKAB and ABB defined a number of factors contributing to the failure of conventional contactors: voltage dips associated with lengthy cables, as well as the effects of damp and dust. The answer: the ABB AF contactor. Fully encapsulated to protect it from a sometimes rough mining environment, the AF contactor's electronically controlled coil absorbs voltage fluctuations, preventing welding. Since replacement with AF contactors, none have welded and contactor failures have become history.

**To ventilate effectively, you need Control.**

# Contact us

## **ABB France**

### **Low voltage Products Division**

10, rue Ampère Z.I. - B.P. 114  
F-69685 Chassieu cedex / France

## **ABB STOTZ-KONTAKT GmbH**

Eppelheimer Straße 82  
D-69123 Heidelberg / Germany

## **ABB**

### **Control Products**

Low Voltage Products  
SE-721 61 VÄSTERÅS, Sweden  
Telephone +46 21 32 07 00  
Telefax +46 21 12 60 01

[www.abb.com/connecttocontrol](http://www.abb.com/connecttocontrol)  
[www.abb.com/lowvoltage](http://www.abb.com/lowvoltage)

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