

# NIVELCO CASE STUDIES

## *NIVOFLIP bypass level indicator in the steel industry*

### **NIVOFLIP + NIVOTRACK measurement system in France**

In this success story our readers can read about an application in the steel industry for monitoring and controlling the liquid level in a small vessel using NIVOFLIP bypass liquid level indicator and NIVOTRACK magnetostrictive level transmitter.

The end-user is one of the leading steel producers in France having wide customer-base primarily from the players of the automotive industry. In their factory in Northern-France they use innovative manufacturing technology to produce the so-called grain-oriented electrical steel. In the form of laminated, wound or punched sheets, it is the essential core material of energy-efficient transformers and generators. Grain-oriented electrical steel is an important material in the production of distribution transformers, power transformers and small transformers used in so many equipments wherever motion is transformed into electrical energy or electrical energy is transformed into motion and where electrical energy is transmitted across large distances.

Prior to rolling the steel sheets to huge spools they are cleaned with demineralised water which is stored in a small vessel. The installed NIVOFLIP bypass level indicator has 550 mm (1.8 feet) flange to flange distance and the unit provides clearly visible optical



display. The bypass chamber is equipped with a NIVOTRACK magnetostrictive level transmitter which performs high accuracy level measurement and displays the level on the SAP-300



plug-in display module and transmits the measurement data to the central control room. The bypass chamber is also equipped with 3 MAK-100 level switches performing high limit, low limit, and low fail-safe level alarm indications. The temperature of the stored demineralised water is 80 °C (176 °F) and the process pressure is atmospheric. The next step of the manufacturing process after cleaning is the heat treatment.

Before the end-user has found the suitable NIVELCO level measuring system offered by C2Plus, he had some troubles with other conventional bypass units, suffering from not only the insufficient accuracy, but also the unreliable performance. The complete measuring system based on the NIVOFLIP device proved to be an excellent solution for our steel industry partner since it performs highly reliable operation thanks to the MAK-100 limit level switches and provides high accuracy level measurement solution by the NIVOTRACK magnetostrictive level transmitter.

*Christophe Carreira*  
CEO  
C2Plus  
[contact@c2plus.fr](mailto:contact@c2plus.fr)