



Industry

Steel producer

Area of use

Laboratory

Customer

voestalpine

EINEN SCHRITT VORAUS.



voestalpine Steel Division

Main products:

Heavy plate, hot-rolled strip, steel sheet

Employees:

Approx. 10,000 employees at the Linz location

Locations:

Linz, Austria - headquarters

Over 500 locations worldwide

Voestalpine Steel Division is one of the **leading European partners of the automotive, white goods and energy industries**. In addition, the company is the global market leader in turnout technology, tool steel and special sections as well as being Europe's number one manufacturer of rails.

Voestalpine Steel Division is found in countless products such as the newest generation of Airbus and also in buildings such as the Atomium in Brussels, London's Wembley Stadium and the Burj Dubai, the world's tallest building.

This application example has been prepared in cooperation with our customer "voestalpine Steel Division". We would like to express our gratitude again for the fantastic cooperation and the trust shown to our company.

Requirement



Automated hardness testing with structured data import and export

In voestalpine Steel Division's test laboratory in Linz, heavy plates and sheets are subject to precise final inspection. On average, 95,000 test results are measured and documented per month.

This creates a need for a hardness tester **capable of testing up to 72 samples fully automatically with a range of methods**. One challenge is presented by the **different sample heights** that can differ by up to ten millimetres.



The **more important requirement** however is the **connection to the customer's own database LMS** (LaboratoryManagementSystem). All test pieces are delivered with the so-called "collective". This contains the component's test number. All important parameters are stored under this number in the database: the test method, the number of test points, the sample name, sample delivery number and user fields. These **test-related parameters** have to be **imported from the customer database** when the test number is entered in the hardness tester software. Conversely, **the test results** have to be automatically **exported back to the database**.

Solution



ecos Workflow xCHANGE – the flexible interface & DV450

The connection to the customer's own database was achieved using the **ecos Workflow xCHANGE interface**. As a result, **all test-related parameters and control commands**, which are all clearly and completely documented, are **accessible**. These parameters and commands can be controlled by an external programme. In this case a programme developed by a third party serves as an "intermediary" between the customer's database and the hardness tester. When an operator enters the test number into the hardness tester, all test-related settings are imported from the database. Once the test is completed, all results are passed back to the database. Consequently **full documentation** is ensured. The benefit of this solution is that the **hardness tester's standard software doesn't need to be changed**. If something changes in the customer's database, only the intermediary software needs to be modified.



The **DuraVision 450** was chosen as the hardness tester. This covers the customer's entire **load range from 3 – 750 kg**. It is also equipped with a **motorised cross slide** that enables fully automatic hardness testing. The **automatic turret** is equipped with a Vickers and a Brinell indenter together with the associated lenses. Tool changes are therefore not necessary. Even parallel **serial testing of multiple components with differing heights** doesn't present a problem for the DuraVision because the test height is the first thing to be determined prior to every test.

Why EMCO-TEST?



„The device technology is very advanced compared to the competition. Plus, the product is developed in-house by EMCO-TEST. This was very important to us because it means we have a clearly defined point of contact. A further benefit of EMCO-TEST is the service we get. “

Günther Etzlstorfer,
Mechanical-Physical Test Laboratory Manager
voestalpine Steel Division