





#### OVERVIEW



-  **CUSTOMER:** Rolpin is a French manufacturer of plywood, phenolic resins, and impregnated papers for internal production and industrial sales.
-  **CHALLENGE:** The heat-hardening properties of phenol resins are the primary concern, as the manufacturing process is exothermic.
-  **SOLUTION:** The installation of one MIVI viscometer on the reactor provides the operators with continuous temperature and viscosity values.
-  **RESULTS:** Since the installation of the MIVI viscometer, there are no hardening issues and production efficiency is increased.

#### Historical resin manufacturer

For over 40 years, Rolpin has met the laminated wood industry's demands by manufacturing maritime pines plywood, phenolic resins, and impregnated papers.

Rolpin is a major supplier of resins in France. The resin-producing Rolpin factory supplies its own plywood facility as well as many other wood manufacturers. Rolpin's production site houses three reactors; each reactor's production cycle is three hours. The factory operates five cycles per day, producing 14,000 tons of resins each year.

Once produced, the resins are stocked in huge tanks for a few days and then transported to customer sites, or the resins are impregnated onto diverse papers. These paper products are dedicated to various markets such as trays, construction materials, and chemical / aeronautics projects.

#### Phenolic resin specifics

Rolpin's factory produces phenolic resins for gluing and paper impregnation. Phenolic resin exhibits ideal product characteristics in terms of solidity and resistance; it also presents difficult production conditions regarding its reaction process.

In effect, the various ingredients come from several suppliers; batches are never exactly the same. Each batch is weighed before mixing and then heated in a reactor for a production cycle. During this cycle, the solution's temperature and viscosity are key parameters. Since this resin has an exothermic reaction process, it will continue to heat even after the heating process is discontinued.

The heating process has clearly identified steps and has very sensitive temperature / viscosity values that require observation. Should any discrepancy arise and the resin hardens, this results in an unusable product and risks damage to the pipes and reactors.

#### Production issues

"We were interested in in-line viscosity measurement for our process, but existing solutions couldn't satisfy our manufacturing context," says Mr. Inçargarat, Development and Technical Manager at Rolpin. After a site visit by Mr. Christophe Vaysse from Anael, Sofraser's French representative, Mr. Inçargarat launched a new study of their resins in a static mode. After positive results with the MIVI viscometer, they purchased and installed the instrument, with this sales stipulation: satisfactory results must materialize in Rolpin's production conditions.

#### Objectives reached

"We immediately observed the fulfillment of our core objectives after the installation of the viscometer. The installation is secure and reliable, and reaction control is more precise due to temperature correlation," notes Inçargarat. He adds, "Every operator feels safer now that the viscometer is installed because stress created by the hardening issue is avoided. In addition to stability and quality, production efficiency has increased. Thanks to the MIVI sensor, those unexpected hardenings that halted manufacturing no longer disrupt the process, and production / sales losses are minimized."

#### Service makes the difference

Positive relations between Anael and Rolpin facilitated this successful application. Mr. Inçargarat comments, "From the initial communication, time and focus was dedicated to finding the solution that improved our process. This is the ideal way to prove the reliability of a product and the reputation of its provider. All of our questions about the instrument, installation, and our after-sales needs were answered immediately."