

Article

# See Clearly with CODACS™

Chemetall's Original  
Data Acquisition and  
Control System.



## Visibility increases value

Chemetall's Process Equipment and Engineering offers CODACS and CODACS Coolant Tracker. These high-performance data acquisition, logging, control, and reporting systems create process visibility, so you can clearly see how your processes are functioning. In fact, the only way to enhance process efficiency is to see clearly.

**BASF**  
We create chemistry

**Chemetall**  
expect more+

## Industry 4.0

There are very few professionals in manufacturing today that have not heard about or been directly impacted by *Industry 4.0*. In general, *Industry 4.0* can be defined as the digital transformation that connects computer systems to robots and machines through wired or wireless connectivity. In the 2020's there is a movement in manufacturing to upgrade to "*Factories of the Future*", where machines and sensors are connected to systems that can visualize the entire production line, allowing better insights on data gathering and improving time-to-market goals. The principles of the *Internet of Things*, a subset of *Industry 4.0*, emphasize the ability to collect raw data and see high value information in proper context. So not only does the data and analytics need to be compiled, it also needs to be clearly reported in real time. While this absolutely constitutes an improvement in efficiency, getting there can be overwhelming.

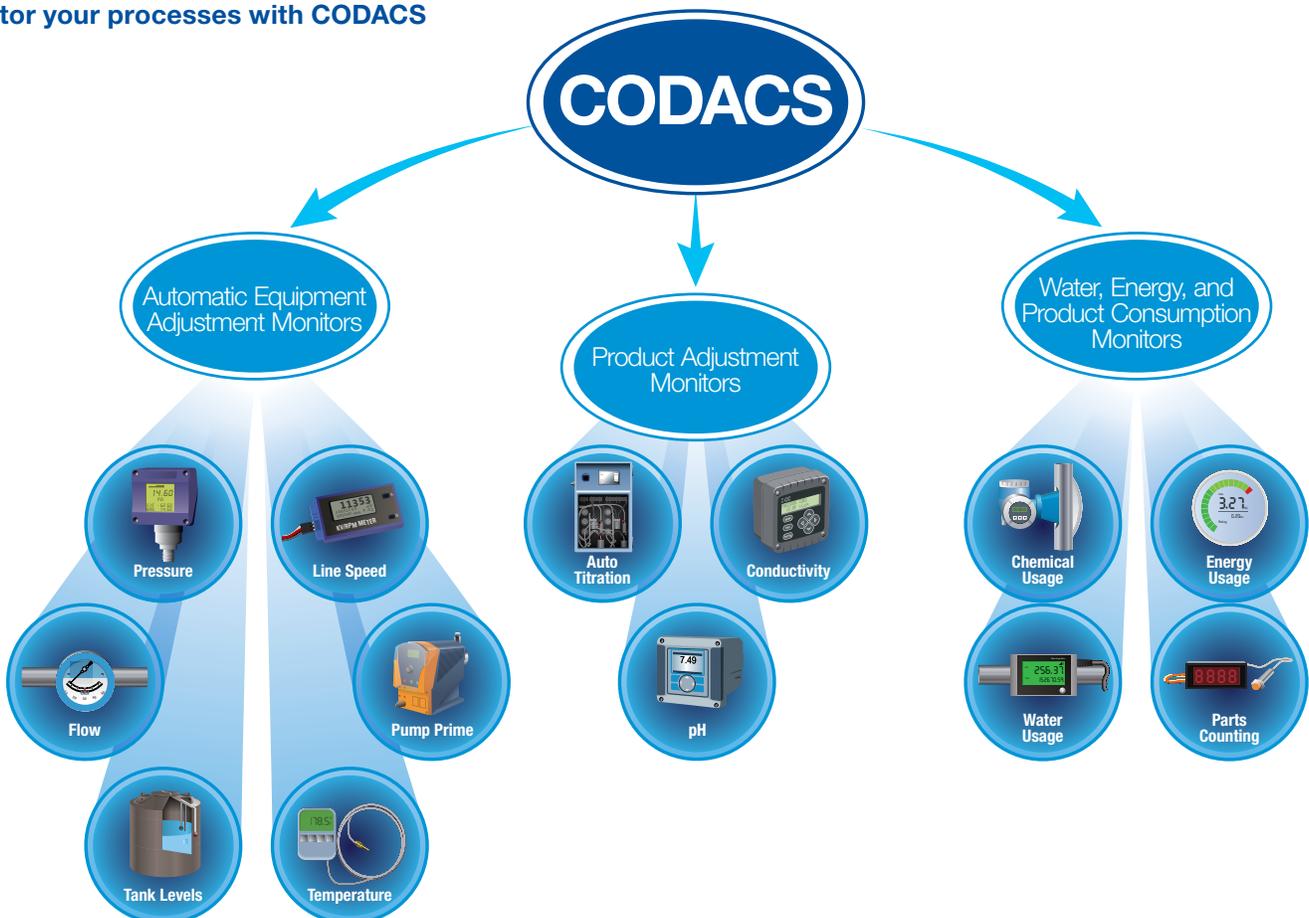
## CODACS

Chemetall, the Surface Treatment global business unit of the Coatings division of BASF, operating under the Chemetall brand, is a leading supplier of applied surface treatments and services for metal, carbon fiber, composite materials, plastic, and glass in a vast range of industries and end markets.

Chemetall is an organization that is not only dedicated to the success of customers but is comprised of teams of experts who are laser focused on continuous process innovation. Chemetall has been providing the digital data of *Industry 4.0* for over 20 years, through its proprietary CODACS, Chemetall's Original Data Acquisition and Control System. Supporting the continued success of customers relies entirely on reliable, reproducible, and cost-effective production.

CODACS creates this visibility through high-performance data acquisition, monitoring, logging, control, and reporting that allows surface treatment and metalworking processes to be clearly seen. CODACS provides the tools to maximize output, improve productivity, increase worker safety, reduce waste, and gain cost savings. CODACS is a system of carefully and expertly engineered sensors, pumps, meters, controllers, and data acquisition equipment. CODACS allows you to conveniently monitor over 100 real-time control parameters, such as pH, flow rate, temperature, tank level, water usage, energy usage, line speed pressure, conductivity, and more, through any connected device. Remotely troubleshoot or rely on the experts at Chemetall to troubleshoot for you. Easily see calculations, data, and reporting within a user-friendly interface so issues can be identified and addressed quickly through real-time alarms.

## Monitor your processes with CODACS





Clearly see your processes with CODACS.

### Increase Process Efficiency

Reducing waste of all kinds increases economic output and reduces environmental footprint. If you oversee a process in manufacturing, you know how difficult it can be to watch all the stages all the time. For example, what if your chemical concentration falls below the setpoint? The solution, of course, is to add product. So, continuous monitoring of concentration to maintain the setpoint level in the process tanks is crucial for many stages; for pretreatment applications, cleaning stages, rinsing stages, in fact, most process tanks are controlled by concentration. If the level is too high, products are wasted, if the levels are too low, the quality of the output could be compromised. CODACS provides this monitoring.

Total Dissolved Solids (TDS) in rinse water are the total dissolved combined content of all inorganic and organic substances present in a liquid. This is an important metric for monitoring in rinse waters. If the TDS is too high, it prevents effective rinsing. Or, even worse, dirty rinse water can be dragged to the post treatment stages and compromise the final output. When the TDS creeps above setpoint, water is automatically added to lower TDS to setpoint. The rinse stage is one of the most critical steps in the cleaning process and is another example where monitoring is crucial. CODACS can even provide alarms to alert you every time an adjustment is made to maintain maximum efficiency.

Sometimes the pressure in one or more spray nozzles falls too low. CODACS alerts the operator so a determination can be made if the nozzles need service. If crucial pressure is too low, it impinges on the efficiency of every stage of a pretreatment or surface treatment process, including cleaning, rinsing, conversion coating, and even final seal.

CODACS provides alarms for high tank volume levels, which can happen with any tank, but is particularly important with a wastewater tank. The same system can be used

with Chemical Totes, to alert procurement when product is running low and needs to be reordered, which saves time and cost because the process is not interrupted.

CODACS also increases efficiency by confirming that line signals are connected to the process control system and that the controls only run when the process line itself is running. Therefore, the chemical pumps and water valves run only when needed.

As a conservation aid, CODACS uses water usage flow sensors to monitor daily usage and compare the usage to the goal, or acceptable level. Also, counterflow tanks increase efficiency by filling a rinse tank with the next rinse tank to re-use and further conserve water.



CODACS lets you connect from anywhere.

Bob Bodak, Director, Process Equipment and Engineering for Chemetall had this to say, "Each CODACS system is custom designed and installed for the customer. We implement CODACS in a step-by-step way, to familiarize you with the features and benefits without any disruption to our customers' existing processes. The first step is to establish connectivity to synchronize the data transfer between your controls and devices. Then we begin to monitor the 'low hanging fruit', implementing a few controls that produce immediate, efficiency results. Ultimately, we broaden the scope, adding sensors to obtain more and more process detail. You will noticeably improve your profitability with CODACS."

*Industry 4.0*, and CODACS, ultimately, are about increasing visibility and reducing waste, of all types, materials, time, energy, and money. We are all working to care for our planet, and we all must contribute to build a sustainable world. Imagine a world where efficiencies are gained and increase competitiveness at the same time! CODACS provides just the type of digital transformation needed to run a trouble-free "Factory of the Future". Contact us today so you too can **see clearly**.

Chemetall, **expect more**.

**Cut it. Clean it. Coat it. Control it. Conserve it.® with us!**



**Trust our expert service and systems to achieve your goals.**

At Chemetall, we are dedicated, so you can expect more. Our global specialists are locally available. Our experts provide focused, passionate, and accountable support. You can expect the highest quality from our integrated portfolio of innovative products. Our labs are fast and accurate. We will collaborate with you to increase the efficiency of your process performance.

We are the Surface Treatment global business unit of the Coatings division of BASF, operating under the Chemetall brand, a leading supplier of applied surface treatments and services for metal, plastic, and glass substrates in a vast range of industries and end markets. As process innovators, fully dedicated to your success, we develop, manufacture, and provide best-in-class technologies, systems, and expertise.

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