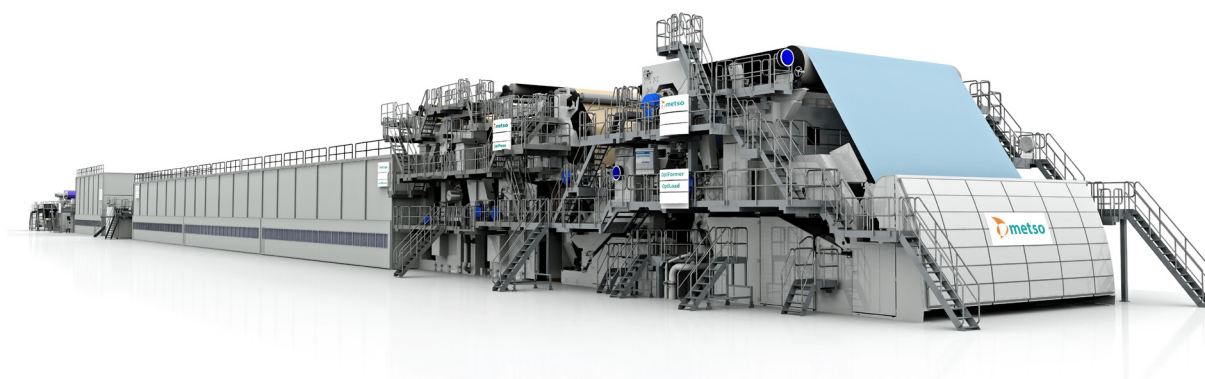




## PARAMETERS, DIAGNOSTICS & ALARMS SOFTWARE FOR DIGITAL HYDRAULICS CONTROL SYSTEM

### About Metso Paper

Metso Corporation is a global supplier of technology and services to customers in the process industries, including mining, construction, pulp and paper, power, and oil and gas. Metso Paper business line provides paper, board and tissue making lines, machines and rebuilds, and also expert and maintenance services. Metso's calendering technology provides innovative solutions for all paper and board grades. Exclusive multi-featured calenders fulfill the needs of the world's fastest and widest paper and board lines, while streamlined solutions are tailored to the needs of medium and small lines as well.



### Taking process and parameters under control

Prosyst provided a software application for managing digital hydraulics control system parameters and PLC program used in specific parts of calender machines. Metso Paper had two key objectives: firstly to visualize important alarm and numerical data for a maintenance user, and secondly to be able to configure essential control parameters easily.

To provide users a familiar user interface, standard web browser was chosen as a client platform. Also, since the software was implemented as a web application, information is easy to access inside the plant network from different devices and locations.

metso TWINLINE X STACK Logged in as: eng Logout

Overview

Alarms

Diagnostics

Parameters

CD Roll Bottom

Loading Cylinders

Mode selection Control parameters Motion Control Tuning Parameters Force Control Tuning Parameters Filtering parameters Interlocking parameters Valve information Page 71 / 72

Previous PA2 DFCU AT2 DFCU PB2 DFCU BT2 DFCU AB2 DFCU Valve pos Valve num Next

Name	Value	New Value	
PA1_no	0	<input type="text" value="4"/>	Defines the position of normally open valves/ PA DFCU
AT1_no	16	<input type="text" value="8"/>	Defines the position of normally open valves/ AT DFCU
PB1_no	16	<input type="text" value="16"/>	Defines the position of normally open valves/ PB DFCU
BT1_no	0	<input type="text"/>	Defines the position of normally open valves/ BT DFCU
AB1_no	0	<input type="text"/>	Defines the position of normally open valves/ AB DFCU
PA1_no	0	<input type="text"/>	Defines the position of normally open valves/ PA DFCU
AT2_no	16	<input type="text"/>	Defines the position of normally open valves/ AT DFCU
PB2_no	16	<input type="text"/>	Defines the position of normally open valves/ PB DFCU
BT2_no	0	<input type="text"/>	Defines the position of normally open valves/ BT DFCU
AB2_no	0	<input type="text"/>	Defines the position of normally open valves/ AB DFCU

No read errors

Update Default Values

The development process used agile methods, especially sprint based approach, co-operation between parties and delivering early a version that could be reviewed by Metso staff. Prosys added features along the way as the system was tested and the specification became more exact. In the end of the project the web application was able to generate a complete user interface with navigational structure and functionality from a single system configuration file. This enables easy and flexible system setup, modifications and maintenance.

Digital hydraulics control system runs on Beckhoff TwinCat 3 PLC platform, from which data can be accessed using Beckhoff ADS interface. For both data access and web server functions, software was developed with C# using ASP.NET Framework 4 technology. To make real-time updating of the browser user interface possible, AJAX components were used.

*// Prosys developed us a software application, which is easy to use and contains the necessary functions. They understood our requirements and the software application is flexible enough to adapt for different needs."*

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