

Programming of tank terminals with Studio 5000 Application Code Manager



PROBLEM DEFINITION

WHEN TANK TERMINALS ARE PROGRAMMED, THERE ARE ALWAYS CERTAIN COMPONENTS TO BE RE-USED WITH EACH TANK (A VALVE, MOTOR/PUMP, TRANSMITTER, ...). IN ORDER TO REDUCE THE PROGRAMMING TIME TO A MINIMUM, VARIOUS GENERATION TOOLS ARE USED AT CONTEC. WITH GREAT INTEREST I STUDIED THE APPLICATION CODE MANAGER (ACM) SOFTWARE PACKAGE WITH CONTEC, TO OPTIMISE THE PROGRAMMING OF TANK TERMINALS.

ACHIEVEMENTS

THE MOST IMPORTANT ACHIEVEMENT IS THAT ONCE THE LIBRARY HAS BEEN CREATED, A TAG LIST GENERATES THE ENTIRE PLC PROGRAM AS WELL AS THE VISUALISATION IN A FEW MINUTES. FOR EVERY PROJECT THERE WILL BE A PREDEFINED LIBRARY, SO THE SOFTWARE ENGINEER JUST HAS TO CHOOSE THE CORRECT LIBRARY AND GENERATE EVERYTHING. THE MAIN ADVANTAGES OF ACM ARE THAT IT IS TIME-SAVING AND IT REDUCES ERRORS. IT'S TIME-SAVING BECAUSE THE PROCESSING TIME WILL BE REDUCED SO THE RESPONSE TIME FOR PROJECTS WILL BE SMALLER. BECAUSE ACM GENERATES BOTH THE VISUALISATION AND THE PLC CODE IT IS SUFFICIENT TO CHECK ONLY ONE TANK. IF IT IS CORRECT FOR ONE TANK IT WILL BE CORRECT FOR EVERY TANK. MORE STANDARDISATION OF ACM ALSO MEANS LESS COPY AND PASTE WORK FOR THE ENGINEERS.

OBJECTIVES

- CORRECTLY GENERATED PLC CODE AND HMI VISUALISATION
- CORRECT LINKING OF THE HMI TO THE PLC CODE
- REDUCING THE DEVELOPMENT TIME OF THE PLC AND VISUALISATION PROGRAM

PRACTICAL

THE CREATED CONFIGURATIONS, TYPICALS, PROGRAMS AND VISUALISATION IMAGES IN ACM HAVE BEEN PUT INTO PRACTICE IN A PROJECT FOR A COMPANY THAT WILL BUILD A NEW TANK FARM AND RENEW EXISTING TANK FARMS CONTINUOUSLY.

