

ABSTRACT

Industry 4.0 is focus on creating intelligent products, process and procedure known as smart factory. The five major features of Industry 4.0 are digitization, optimization and customization of products; automation and adaption, Human Machine Interaction; value-added services and business; automatic data exchange and communication. PTPN VIII Ciater is one of the State-Owned Enterprise that produce tea, and one of the tea' type is orthodox tea. One of the component of Industry 4.0 is Human Machine Interaction, thus by applying Supervisory Control and Data Acquisition (SCADA) and using Human Machine Interface (HMI) it will help PTPN VIII Ciater to do monitoring and controlling the whole production system on it. SCADA system could be implemented in withering and grinding station on PTPN. In withering station there is constraint that wet temperature shall not be more two degrees Celsius of dry temperature, if it is more than two degrees Celsius, operator should open up the heat exchanger valve, thus monitoring 24 hours is needed in this station. In grinding station there also constraint in humidity and temperature on it, and also operator should be monitoring the output of each machine because many powder teas fell to the ground because over capacity in each trolley. To be able operate HMI software, operator on PTPN VIII should know the basic of HMI software, because the operator in PTPN does not know HMI thus there should be an approach method of HMI design in order to help the operator understand and learn quickly about HMI. Thus User Centered Design (UCD) is used as an interface design method. Applying UCD will make the user as a center of design, thus the operator the one who decide that the design is acceptable or not. Not only that, Quality in Use Integrated Measurement (QUIM) is needed to evaluate ten factors on HMI: efficiency, effectiveness, satisfaction, productivity, learnability, safety, trustfulness, accessibility, universality, usefulness. Applying HMI gives effect such as the record any temperature changes for 24 hours per day, and applying QUIM give total 82,73% satisfaction on user.

Keywords: PTPN VIII Ciater, SCADA System, Human Machine Interface, User Centered Design, Quality in User Integrated Measurement