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DEVELOPING APPLICATION SOFTWARE IN PROCESS UNIT OF BHILAI STEEL PLANT (SAIL) FOR AUGMENTATION OF ARGON USING DISTRIBUTED CONTROL SYSTEM BASED SYSTEM AND MEASUREMENT OF PHYSICAL QUANTITIES

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Abstract

The BSP plant has the capacity to produce 4MT steel per annum. At present is producing 5 MT per annum with existing units; which is beyond the capacity & targeting 7 MT per annum with close to 2009 & to achieve this target they need to modernized and expansion of existing production & processing units. One of the very important process unit is Argon system in oxygen plant-2; which is an inert gas and widely required at SMS-II (steel melting shop–II) & CCS (Continuous Casting Shop) for "sterilization purpose facilitate continuous casting is known as Augmentation of Argon" [1].

"So aim of this project is to develop and implement a "DCS (Distributed Control System) based ladder design for controller and HMI (Human Machine Interface)" both, as an application S/W using RSLogix5000 and RSView32 for Augmentation of Argon i.e. pressurized gaseous argon to meet the standards of industrial automation and supply it to different units of SMS-II & CCS in existing units and new proposed units due to expansion to meet 7 MT production of steel" by measuring some very important physical quantities like level of a closed chamber, flow, temperature of heat exchangers and pressure of argon during filling, pressuring, feeding and depressurization of current and standby units.

Keywords – Augmentation, Argon, SMS, CCS, HMI, PLC, Controller, HMI, and Ladder design.