

ABSTRAK

Pembuatan baja di PT. Krakatau Steel melalui beberapa tahapan sebelum akhirnya dihasilkan baja yang siap dipasarkan, diantaranya adalah pembuatan *Direct Reduction Iron* (DRI) yang melalui berbagai proses, salah satunya proses reformasi di *reformer* untuk menghasilkan gas proses yang digunakan untuk mereduksi bijih besi menjadi DRI di mana terdapat berbagai *transmitter* yang berfungsi mengambil data-data proses dari lapangan sebagai informasi dalam menjalankan proses reformasi bagi para *operator* di *control room*, antara lain *temperature, flow, level* dan *pressure transmitter*. Selama ini, data-data proses tersebut di-monitor melalui *Digital Recorder* yang sering mengalami masalah antara lain piranti mekanik dan piranti elektronik yang beberapa kali mengalami kerusakan dan juga suku cadang yang sudah tidak diproduksi.

Atas dasar permasalahan tersebut, Penulis berinisiatif untuk mengganti sistem *monitoring* lama yang menggunakan *Digital Recorder* menjadi sistem *monitoring* baru. Pada sistem *monitoring* yang baru, data-data proses yang diambil *transmitter-transmitter* di lapangan akan diterima oleh PLC *Honeywell HC900* sebagai pengolah data dan data hasil pengukuran *transmitter* tersebut akan ditampilkan oleh *software Specview 32* di *monitor Personal Computer* (PC). Tugas akhir yang Penulis buat dinamakan **Sistem Monitoring Temperature, Flow, Pressure dan Level pada Reformer 3 & 4 PT. Krakatau Steel.**

Kata kunci: *reformer, monitoring, transmitter, flow, pressure, level temperature, plc, software*

ABSTRACT

Steel making process at PT. Krakatau Steel pass through some stages before ready-to-distribute steel finally produced. One of the stages is the DRI (Direct Reducing Iron) making process that passes through many process steps, includes the reformation process on the reformer to produce process gas for reducing the Iron Ore to be DRI which is has many transmitters on it to take the field process parameters as informations for the operators at control room to operate the reformations process. The transmitters that have been used are temperature, flow, level and pressure transmitters. All this time, those field process parameters is monitored using a conventional Digital Recorder that recently often have many problems, such as mechanical and electronical failure and the spare parts that have not been reproduced.

*Based on that problems, Writer have an idea to replace the conventional monitoring system using Digital Recorder with the new system. In the new system, the field process parameters which are taken by the transmitters would be received by Honeywell HC900 Programmable Logic Controller as field parameters processor and the measured paramaters would be displayed using Specview32 software on PC's monitor. The final project that Writer will make named **Temperature, Flow, Pressure and Level Monitoring System at Reformer 3&4 of PT. Krakatau Steel.***

Keywords: *reformer, monitoring, transmitter, flow, pressure, level, temperature, plc, software*