ABSTRACT

Heat Recovery Steam Generator (HRSG) is a device that serves to convert water to steam at a certain temperature and pressure. This equipment is contained in the plant Gas Power and Steam (PLTGU) that uses combined cycle (Combine Cycle). In the region there HRSG superheater superheater-1 and-2, which is the area of advanced steam heating.

Header pipe is a major part of the HRSG which has an important role as the main pipe carrying a temperature and pressure are very high compared with other types of existing pipe installation within the HRSG. In this study the headers are made of welded steel using GTAW and SMAW welding processes. In the process welding should show metallurgical happens to the material to be welded because of the material to be welded is aging (aging) because it has been working at very high temperatures and resulting changes in micro structure and metallography.

In this superheater area containing an array of pipes that work on high temperature and pressure continuously condition this affect and change the strength and material properties as well as pipe welding, weld strength that connect between the pipes. Study was undertaken to know whether there is influence of temperature-welded with weld strength and to know whether the remaining life assessment (RLA) on the pipe and how to overcome it.

Key words: remaining life assessment (RLA), Tube, HRSG, Metallography