Measurement system is the key of all the problems and process improvement in the industrial world. Then the required measurement system which has been verified both in terms of methods of measurement, measuring instruments, and the person who doing the measurement. PT Alstom Power ESI Surabaya is facing problems of the lack of unanimity between the perception of quality control inspectors in deciding received or rejected welding result, as well as the difference in deciding the types of defects that exist. This study uses the process capability analysis and attribute agreement analysis method to determine the suitability and consistency in the QC inspectors visually inspect the welds which includes three variables, namely the completeness of reports, decisions, and discontinuities. Kappa statistics (k) is the parameter attribute agreement analysis is used to see the consistency of inspectors. Kappa values show that consistency is still very low QC inspector on three variables, so do a visual inspection training of welds to QC inspectors. Kappa value after training indicates that there has been a significant increase for completeness and decision variables, whereas for variable discontinuity has not increased significantly.
Key words: Kappa, Capability, Consistency, Visual Inspection.