

Figure 9 Graph. Hardness value after heat treatment of ST37 steel

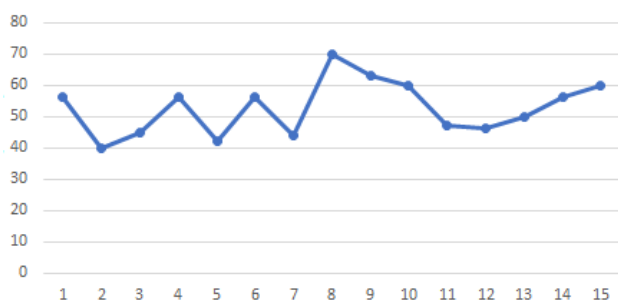


Figure 10. Graph of Impact Testing Values on ST37 Steel

5. Conclusion

Based on the research that has been done, the author made the following conclusions: ST 37 steel material:

- The results of the Hardness test show that the test object that was reheated at 900°C had a hardness of 85.56 VHN, meanwhile the highest hardness value resulted from heating at temperatures from 300°C to 400°C which had a hardness value of 52.62 VHN.
- The results of the impact test showed that the test specimens that were heated at 900°C had an impact strength of 52.73 Joule/mm² Meanwhile, heating carried out at a temperature of 300°C-500°C had the lowest impact strength of 40 Joule/mm², and the results of this temperature were the most different from the impact strength of the initial material.
- From the hardness and impact test data, heating at 900°C is the most appropriate temperature for reforming.

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