عنوان مقاله:

Effect of inclusions on the microstructure and mechanical properties of SMAW welded API 5L Grade B steels

محل انتشار:

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نویسندگان:

Shahin Ghahremani Ghadar - *Department of Metallurgy and Materials Science, Sahand University of technology, tabriz, Iran.*

Tohid Saeid. - *Department of Metallurgy and Materials Science, Sahand University of technology, tabriz, Iran*

Javad Mollaei Milani. - *Department of Metallurgy and Materials Science, Sahand University of technology, tabriz, Iran*

Mir Saman Safavi - *Materials Engineering Department, Faculty of Mechanical Engineering, University of Tabriz, Tabriz, Iran*

خلاصه مقاله:

Inclusions can affect the microstructure of welds and these changes in the microstructure leads to reducing mechanical properties. The chemical composition and size of inclusions are influenced by welding method, welding parameters, etc. Different size of inclusions can produce different kinds of ferrite phases and each of them may have different effect on the weld mechanical and microstructure properties. In this research, for studying effect of inclusions on microstructure of API 5L Grade B steels in SMAW, three different types of electrodes, with different amount of TiO2 were produced. The results show that the amount of inclusions and also Ti in weld metals increase by increasing the TiO2 amount in the electrodes. However acicular ferrite was not seen in sample which has the highest amount of inclusions and changing of cooling rate during welding.Mechanical properties namely tensile properties of different welds have been studied in this paper

کلمات کلیدی:

Inclusions, Acicular ferrite, SMAW , API 5L Grade B steels

لینک ثابت مقاله در پایگاه سیویلیکا: