

## عنوان مقاله:

Properties and Macromolecular Structure in Weld Interface of Pipe Grades Polyethylene

## محل انتشار:

کنفرانس بین المللی فرآورش پلیمرها (سال: 1390)

تعداد صفحات اصل مقاله: 6

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## خلاصه مقاله:

Polyethylene pipeline performance is a function of their structural parts such as pipe and fittings. Pipe and fittings welded connection area is effective factor in pipeline design. Difference polyethylene grades are use in pipe and fitting cause long time defect due to weld interfacial phase separation. This is a time and temperature controlled phenomena related to macromolecular structure of polyethylene. Structure and mechanical properties of butt welded different pipe grades of high density polyethylene (HDPE, PE100 and PE80) were studied. Tensile test of different grades (PE100-PE80) welded sample shows poor mechanical properties compared to same grades welded samples (PE100-PE100 and PE80-PE80). Tensile properties of aged samples were decreased and the higher reduction of different grades welded was shown. DSC technique is use to molecular structure study of welded samples by Flory-Wunderlich theory

## کلمات کلیدی:

Polyethylene, Pipe, Fitting, weld, interface

## لینک ثابت مقاله در پایگاه سیویلیکا:

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