METHOD OF INCREASING ALPHA-OLEFIN CONTENT

ABSTRACT

Implementations described herein generally relate to methods for purifying alpha-olefins. The alpha-olefins may be used to form drag reducing agents for improving flow of hydrocarbons through conduits, particularly pipelines. In one implementation, a method of increasing alpha-olefin content is provided. The method includes providing an olefin feedstock composition having an alpha-mono-olefin and at least one of a diolefin having an equal number of carbon atoms to the alpha-mono-olefin and/or a triolefin having an equal number of carbon atoms to the alpha-mono-olefin. The method further includes contacting the olefin feedstock composition with ethylene in the presence of a catalyst composition including an olefin metathesis catalyst. The method further includes reacting the olefin feedstock composition and ethylene at metathesis reaction conditions to produce an alpha-olefin product comprising the alpha-mono-olefin and alpha-olefins having fewer carbon atoms than the alpha-mono-olefin.

Fig. 1