

### Effect of Pressure on the quality of pitch derived from Pyrolyzed Fuel Oil

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Petroleum based pitch has been successfully synthesized by using a reactor capable of controlling system pressure. Pyrolyzed fuel oil (PFO) was selected as a feed material due to its high aromatic content. Three system pressure of 1, 15, 40 bar was selected and experimental pitches were synthesized according to the system pressure. The pitches were characterized by measuring softening point and liquid crystalline formation. At a system pressure of 15 bar, pitch synthesis process from PFO was completed in 4 hours, whereas pitch synthesis at higher pressure of 40 bar took 10 hours. Although there is no significant difference in pitch yield depending upon the system pressure, softening point of pitch, one of representative rheological pitch characteristics, can be controlled by adjusting the system pressure; pitch synthesized at an atmospheric pressure resulted in higher softening temperature among tested pressure environment.