INTISARI

Pada proses konstruksi dikatakan bahwa mutu suatu bangunan dipengaruhi oleh kualitas volume pekerjaan betonnya. Sehingga, pada pelaksanaannya perlu dilakukan pengendalian mutu, salah satunya pada nilai kuat tekannya (*f'c*) yang harus > 35 MPa. Namun, penyimpangan akibat variabilitas pada kuat tekan beton masih memungkinkan terjadi. Sehingga, analisis pada penelitian ini dilakukan untuk mengetahui variabilitas yang sesuai dengan SNI 6815:2002, serta evaluasi keseragaman kuat tekan beton yang sesuai dengan persyaratan pada syarat SNI 6880-2016.

Pada sampel beton struktur *bore pile* di Zona F Proyek Pembangunan GIK-UGM ini telah dilakukan analisis dengan metode *Statistical Process Control* (SPC). Pada tahap awal dilakukan uji normalitas terhadap distribusi datanya, setelah itu dilakukan analisis variabilitas data berdasarkan nilai standar deviasinya. Kemudian, analisis peta kendali terhadap X-bar dan *Range* (R) untuk untuk pengendalian data. Selain itu, terdapat juga analisis terhadap kuat tekan karakteristiknya untuk mengetahui keseragaman kualitas sampel yang memenuhi syarat SNI 6880-2016 atau tidaknya.

Berdasarkan hasil analisis normalitas diperoleh bahwa sampel uji 28, 14, dan 7 hari telah berdistribusi normal. Dimana, variabilitasnya dapat dikategorikan menurut SNI 6815:2002. Sedangkan, pada hasil evaluasi keseragaman kuat tekan karakteristik betonnya dapat sesuai dengan persyaratan ada SNI 6880-2016.

Kata kunci : *Statistical Process Control* (SPC), Variabilitas, Kuat Tekan Beton

ABSTRACT

In the construction process, it is said that the quality of a building is influenced by the quality of the volume of concrete work. So, in its implementation it is necessary to carry out quality control, one of which is the compressive strength value (f'c) which must be > 35 MPa. However, deviations due to variability in concrete compressive strength are still possible. Thus, the analysis in this research was carried out to determine variability in accordance with SNI 6815:2002, as well as evaluate the uniformity of concrete compressive strength in accordance with the requirements of SNI 6880-2016.

The concrete samples of the bore pile structure in Zone F of the GIK-UGM Development Project have been analyzed using the Statistical Process Control (SPC) method. In the initial stage, a normality test was carried out on the data distribution, after that a data variability analysis was carried out based on the standard deviation value. Then, analyze the control chart for X-bar and Range (R) for data control. Apart from that, there is also an analysis of the compressive strength characteristics to determine whether the sample quality is uniform and meets the requirements of SNI 6880-2016 or not.

Based on the results of the normality analysis, it was found that the 28, 14 and 7 day test samples had a normal distribution. Where, the variability can be categorized according to SNI 6815:2002. Meanwhile, the results of the evaluation of the uniformity of compressive strength of the concrete characteristics can be in accordance with the requirements of SNI 6880-2016.

Keywords: Statistical Process Control (SPC), Variability, Concrete Compressive Strength