

PREDIKSI PRODUKSI AIR
STUDI KASUS PDAM KABUPATEN GRESIK DENGAN
METODE *TRIPLE EXPONENTIAL SMOOTHING*
(*BROWN*)

**Bagus Fajar Wirautama - Eko Prasetyo, S.Kom., M.Kom. - Misbah, ST.,
M.T.**

¹⁾ Mahasiswa Teknik Informatika Universitas Muhammadiyah Gresik

²⁾ Dosen tetap Universitas Muhammadiyah Gresik
Fakultas Teknik, Universitas Muhammadiyah Gresik
Jl.Sumatra no.101 GKB Gresik
baguswira7@gmail.com

ABSTRACT

Every company always make production planning for next month, the purpose is for the process of production can be planned and schedule based on need and capability production, and however it can fulfil the customer request. In this case PDAM Kabupaten Gresik was do production planning with use water usage estimate based on intuitive with influence of opinion from production management only. So, it was needed a system which can help the production management to product the result of production in next month that more objective and based on real calculation of the data also help production planning without spend a lots of time. This research uses triple exponential smoothing (brown) method which calculate all of the water usage sample around 36 periods start from Janury 2013 period until December 2015 where the result from all of the prediction will be apply as comparator value with the result data of actual water usage which decided the failed value or error value in the prediction use mean absolute deviation (MAD) and mean absolute percentage error (MAPE). From the three categories of analysis testing of forecasting data is 3 months, 6 months and 12 months who had the best prediction values MAD and MAPE is the lowest unit of Gresik City (6 months) 627.437 m³ with a value of MAD 57.248 and MAPE 9.209%, unit Kebomas (12 months) 258.125 m³ with a value of MAD 20.782 and MAPE 8.300%, unit Manyar (6 months) 264.667 m³ with a value of MAD 18.084 and MAPE 7.111%, unit Cerme (3 months) 199.502 m³ with a value of MAD 14.048 and MAPE 7.992%, unit Menganti (12 months) 224.384 m³ with a value of MAD 12.744 and MAPE 6.279%, unit Driyorejo (12 months) 381.513 m³ with a value of MAD 29.958 and MAPE 8.099%.

Kata Kunci: *Triple Exponential Smoothing (Brown), Mean Absolute Deviation, Mean Absolut percentage Error.*