Optimasi Prototipe Turbin Angin Menggunakan Metode Conjugate Gradient

Title	Optimasi Prototipe Turbin Angin Menggunakan Metode Conjugate Gradient
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Abstract	One of the principal issue of energy conversion from wind energy to electrical energy is the optimization of its conversion process. Energy conversion is called optimum if the power lost is ÃƒÂ,Ã‚Â minimum. The condition can be attained at the development stage of a wind turbine prototype. ÃƒÂ,Ã‚Â This research will determine the optimum value theÃƒÂ,Ã‚Â variables of ÃƒÂ,Ã‚Â various operation condition by using ÃƒÂ,Ã‚Â multivariables Conjugate Gradient (CG) optimization algorithm. It is found that the optimum value is attained atÃƒÂ,Ã‚Â H = 1,0 m and D = 0,6 m, hence minimum power lost. The performance of turbine prototype design at laboratory, showed that the turbine can testing at low and high wind speed and ÃƒÂ,Ã‚Â ÃƒÂ,Ã‚Â the irrespective of wind direction condition. ÃƒÂ,Ã‚Â ÃƒÂ,Ã‚Â Keywords :ÃƒÂ,Ã‚Â optimalization, prototype, wind turbin, conjugate gradient ÃƒÂ,Ã‚Â
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