study of FF-LOAD function in FF+FB control of centrifugal compressor system

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In general centrifugal compressor system, pressure fluctuation is the most important problem. So many control method have been designed to reduce pressure fluctuation and improve process operating stability. In this paper, more advanced control method is developed and applied to gas compression system which is supplying fuel gas to gas turbine. Three compressores supply the fuel gas to five independent gas turbines through on common header and one stand-by compressor is ready for trip scenario. The goal of compressor control is to maintain common head pressure when the load shedding occurs and the gas turbine load is suddenly goes down. For the load changing of gas turbine feed forward control and for common head pressure stabilization feedback control are proposed. In this paper function of between load signal and FF(feed forward) signal is introduced in logical way based on simulator : HYSYS(ver 7.3). Furthermore, more advanced combination of FF and FB signal to decide proper valve opening in system for maintaining common header is studied.