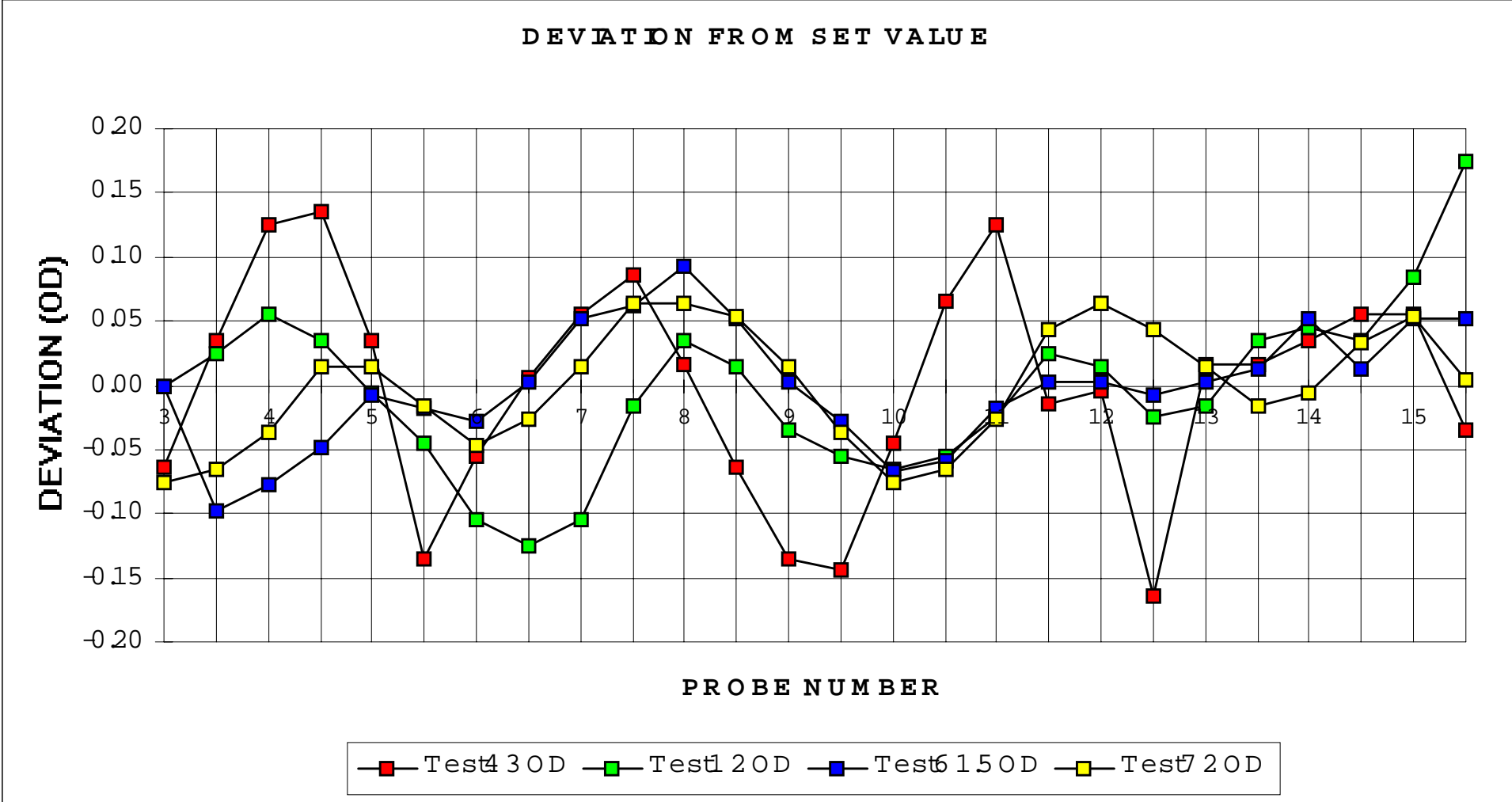


CLOSED LOOP CONTROL EXPERIMENT



Thin Film Deposition Monitor measuring Optical Density (OD) was used to control a Vacuum Coater with 19 boats. However, the experimental runs were made with 13 active boats numbered 3 to 15. Varying OD was used for each run ranging from 1.5 OD to 3 OD. Experimental runs were rather short i.e. only 1km of plastic web was coated. After each run a strip of material, about 20cm wide was cut off at approximately 300m after the start of the run. An Optical Densitometer was used to measure Optical Density. As shown, in the graph above, one measurement was taken above each boat and one between each boat. All the readings were normalised and only the deviation from the mean was plotted. The maximum deviation was only ± 0.15 OD regardless of the mean Optical Density.