HK INSTRUMENT SYSTEMS

Pittsburgh, PA

INDUSTRY: PULP AND PAPER

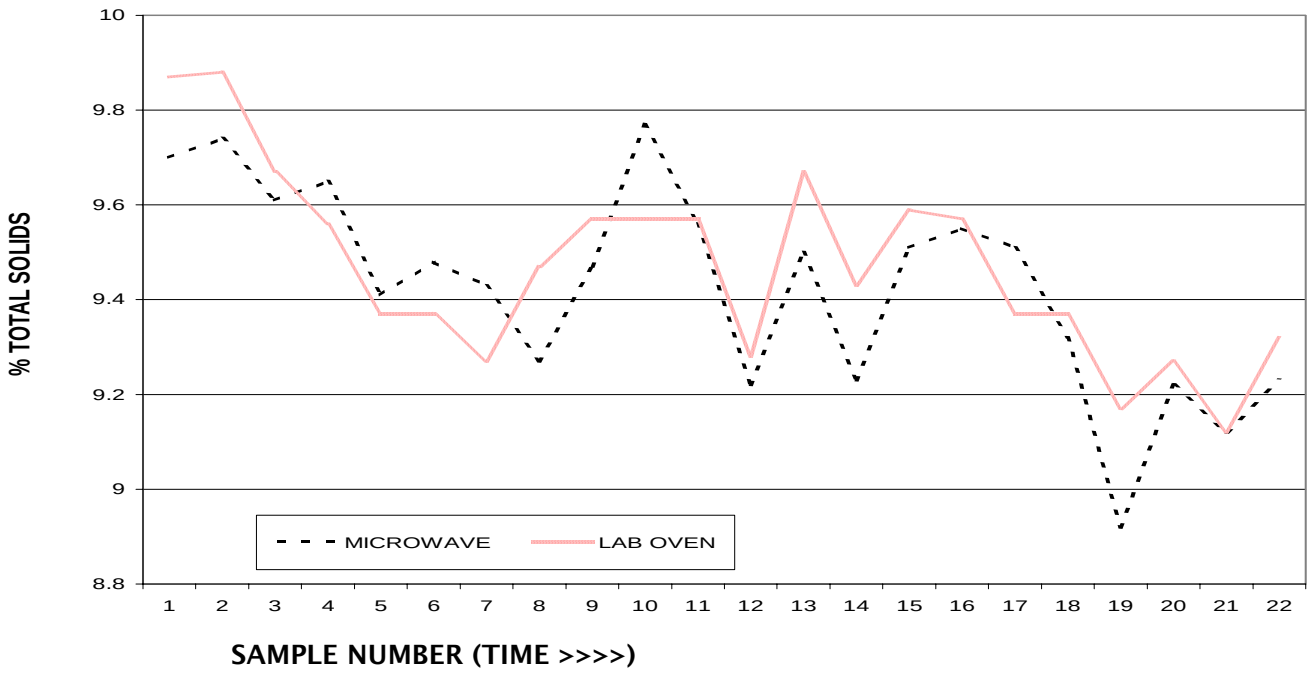
APPLICATION: MEASUREMENT OF THE **% TOTAL SOLIDS OF STARCH** AND WATER IN A PIPE.

INSTALLATION: THE HK-1 MICROWAVE INSTRUMENT SYSTEM WAS INSTALLED ON AN 8 INCH VERTICAL PIPE. FOR EASY INSTALLATION, THE INSERTION SENSORS WERE INSTALLED DIRECTLY ON THE PIPE USING THREADED HALF-COUPLINGS.
AN RTD WAS INSTALLED FOR TEMPERATURE COMPENSATION.

TESTING: SAMPLES WERE COLLECTED FOR LAB ANALYSIS AT THE SAME TIME READINGS OF THE MICROWAVE SYSTEM WERE RECORDED. LOSS OF WEIGHT BY DRYING WAS USED TO DETERMINE THE % TOTAL SOLIDS IN THE LAB. READINGS FROM THE HK-1 SYSTEM WERE RECORDED FOR EACH SAMPLE COLLECTED.

RESULTS: CORRELATION BETWEEN THE LAB VALUES OF %Ts AND THE HK-1 MICROWAVE INSTRUMENT READINGS OF %Ts IS EXCELLENT. THERE IS NEVER MORE THAN 0.2% DIFFERENCE BETWEEN THE LAB AND THE HK-1 METER.

LAB vs MICROWAVE (STARCH SOLIDS IN WATER)



CONCLUSIONS: THE HK-1 MICROWAVE INSTRUMENT SYSTEM IS AN EXCELLENT TOOL THAT CAN BE USED TO MONITOR AND CONTROL THE % TOTAL SOLIDS OF A STARCH AND WATER MIXTURE.

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