

# INSTRUMENT SYSTEMS

Pittsburgh, PA

## GYPSUM WALLBOARD

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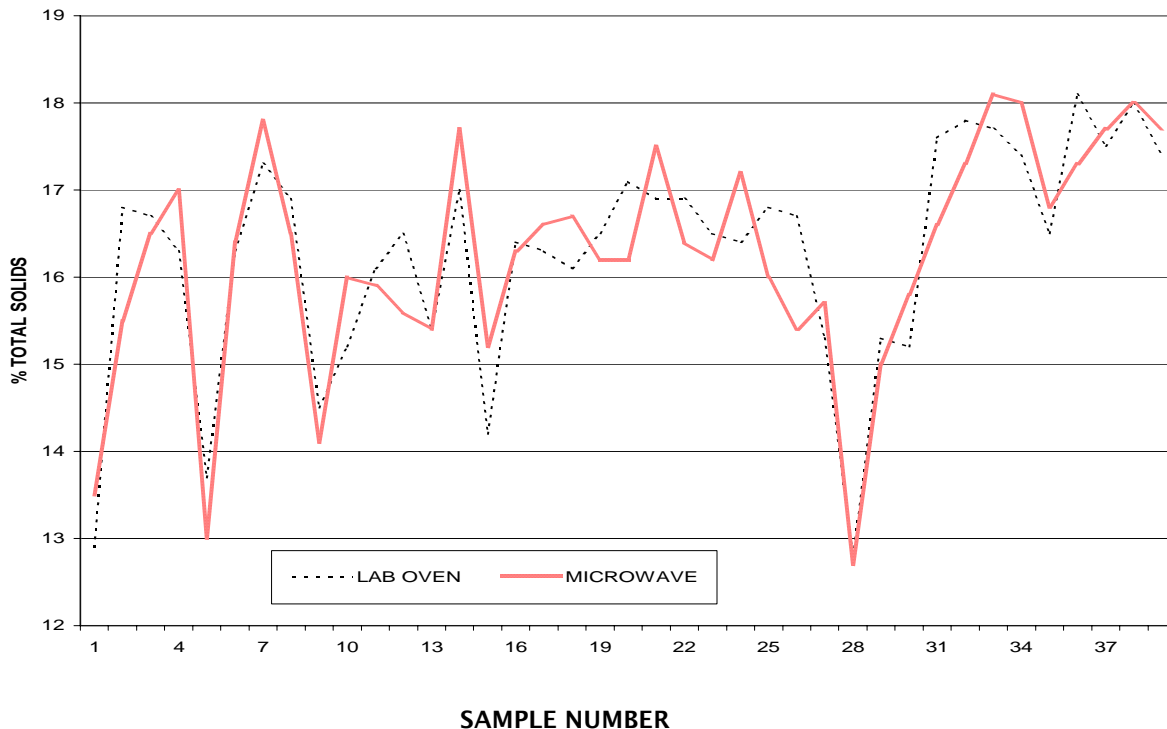
**APPLICATION:** TO MEASURE % TOTAL SOLIDS OF A GYPSUM AND WATER MIXTURE

**INSTALLATION:** THE HK-1 MICROWAVE INSTRUMENT SYSTEM WAS INSTALLED ON AN EIGHT (8) INCH HORIZONTAL PIPE. THE SENSOR PINS WERE INSTALLED DIRECTLY ON THE PIPE USING HALF COUPLINGS. TEMPERATURE COMPENSATION WAS INSTALLED.

**TESTING:** SAMPLES WERE COLLECTED FROM THE PIPE DURING A ONE MONTH PERIOD. THE COLLECTED SAMPLES WERE TAKEN TO THE LAB AND DRIED IN A MICROWAVE OVEN. READINGS FROM THE MICROWAVE SYSTEM WERE RECORDED AT THE SAME TIME SAMPLES WERE COLLECTED.

**RESULTS:** CORRELATION BETWEEN THE HK-1 MICROWAVE INSTRUMENT READINGS AND THE LAB MICROWAVE OVEN CALCULATIONS IS VERY GOOD. THE MICROWAVE SYSTEM WILL TRACK THE LAB OVEN OVER A LONG TIME PERIOD WITHOUT ANY DRIFT.

### GYPSUM AND WATER



**CONCLUSIONS:** THE HK-1 MICROWAVE INSTRUMENT SYSTEM IS A VERY GOOD TOOL THAT CAN BE USED TO MONITOR AND CONTROL THE % TOTAL SOLIDS OF A GYPSUM AND WATER MIXTURE.