



Level



Pressure



Flow



Temperature



Liquid Analysis



Registration



Systems Components



Services



Solutions

# FMP 40 TDR Level Measurement in Coal Bunker- Power

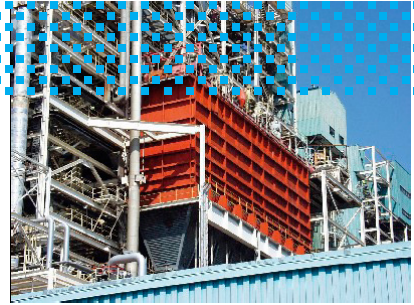
## Levelflex outperforms ultrasonic level instrument in dusty environment



Coal burning Powerplant from a distant



Levelflex FMP 40



Coal bunker

Levelflex FMP 40 is used to measure the level in coal bunkers to guarantee continuous power production. The TDR instrument outperforms a competitor's ultrasonic instrument that failed frequently in this application.

### Company Profile

Coal burning power plant located in the Midwest with 2 units that provide approximately 730 megawatts each. The plant uses low-sulfur Wyoming coal between 15,000 and 30,000 tons a day.

### Production Process

Coal that is conveyed from the yard is buffered in six bunkers prior to the burner. To ensure a continuous production process, these bunkers have to be filled to a certain level at all times. Since the level measurement is critical to maintain production, each bunker was equipped with two measurement instruments.

### Application

Coal bunker: 45 ft. tall  
20 ft. x 50 ft.  
6 chambers  
2 Measuring points per chamber

### Installed instruments:

#### FMP 40

- ¼" cable diameter (45 ft.)
- + centering disc
- Aluminum housing (FM XP)
- 1½" NPT process connection
- 4 - 20mA (HART®) electronic with display

The instruments are screwed into a flange with a nozzle (length 12") on top of the concrete ceiling of the bunkers.

### Disadvantages of ultrasonic level measurement

Prior to the Levelflex units, a competitor's ultrasonic instruments were installed. These instruments frequently failed in extreme weather situations (for example: in hot and humid summers and cold winters) causing the operator to check the contents of the bunkers manually. The ultrasonic instruments did not provide a continuous reading, especially during filling, causing overflow errors.

### Advantages of Levelflex

After the ultrasonic instruments had been replaced with TDR instruments, the operator experienced a stable and accurate reading even during filling. An additional advantage of the Levelflex FMP 40 is the ToF tool that allows the customer to setup their instruments via HART® in the control room.

### Customer feedback

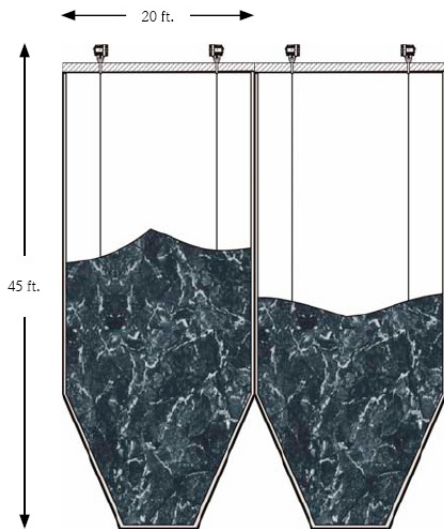
The customer is very satisfied with the performance of the Levelflex. Based on this experience, the decision was made to replace the ultrasonic units in the second 730 megawatt unit as well. The performance of the Levelflex is so good that the installation of two measurement points per bunker seems to be unnecessary.

### For more information contact:

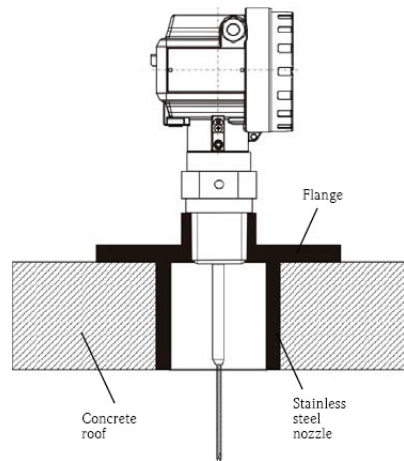
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317-535-7138  
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Installed Levelflex FMP 40



Sketch of FMP 40 installation in bunker



FMP 40 installation in the concrete roof

ISO 9001:2000 Certified

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