



## AVFM 6.1 Provides Discharge Monitoring for Steel Factory in Thailand.

Aluminum casting is a type of metalworking process that At a steel factory in Thailand, they were looking to get measurement on one of their outlet pipes, monitoring how much treated water was leaving the factory and entering local water sources.

### Discharge Monitoring at the Forefront of Business

At an aluminum manufacturer in Korea, they were looking Several water challenges exist in Thailand, such as a competitive increase in water demand in agriculture, industry and service sectors, as well as deterioration of water quality due to increasing pollutants, deepening damage from floods and droughts due to climate change, and management of rivers and aquifers across regions.

To manage industry wastewater quality and the reduction of wastewater at point sources, the Thai government has established priorities in the regional plan. First, a permit system to control the industrial loading, and second, installation of online monitoring equipment at point sources. Moreover, the Pollution Control Department is revising effluent standards in order to control and prevent pollution discharged from various point sources more effectively and efficiently.

### Compliance Monitoring with AVFM 6.1

This Steel Factory in Thailand were looking to gain measurement of the amount of wastewater leaving the factory, so they reached out to Pulsar Measurement partner TCRSS in Thailand for help. After listening to the application requirements, TCRSS suggested using the AVFM 6.1 Area Velocity Flow Meter.

The Area Velocity Flow Measurement method is the most common method of flow measurement in partially filled pipes or channels. The AVFM 6.1 Area Velocity Flow Meter uses a submersible ultrasonic sensor that measures both the level and velocity of the flowing liquid to calculate flow



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measurement in a partially filled channel or pipe. The submersible sensor is mounted at the bottom of the pipe or channel, and is built to resist fouling, corrosion, and abrasion thanks to its hydrodynamic shape and no moving parts or orifices. The AVFM 6.1 Area Velocity Flow Meter can be configured with the standard submerged velocity-level sensor, or alternatively with submerged velocity in combination with a separate non-contacting ultrasonic level sensor, which is suitable for highly aerated fluids or those with a high concentration of suspended solids.

The AVFM 6.1 can measure forward flow velocity up to 6 m/s (19.7 ft/s) and reverse flow up to 1.5 m/s (5ft/s). The electronics and software sample and average flow rates continuously in order to provide stable readings. The submerged sensor will measure flow in partially full and surcharged pipes with pressure up to 10 psi. The minimum recommended pipe diameter for the AVFM 6.1 Area-Velocity Flow Meter is 150 mm (5.9 in).

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## Blockage Detection, An Added Bonus.

After about two months of the flow meter being installed, the measurement value started to decrease with the same amount of water being discharged. Of course, the natural reaction is to question the performance of instrumentation, however upon closer inspection, the team discovered that there was a large amount of debris clogging up the outlet pipe causing abnormal flows. This allowed the team to successfully remove the debris from the pipe and therefore restoring normal flow. The meter also returned to normal, giving accurate and reliable readings for the end user.

## More Information

AVFM 6.1 Area Velocity Flow Meter: <https://pulsarmeasurement.com/en/avfm-6-1>

Partner Locator: <https://pulsarmeasurement.com/en/partnerlocator>



[www.pulsarmeasurement.com](http://www.pulsarmeasurement.com)

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