

U.S. Steel Chooses Data Delivery Services for Water Discharge Waste Flow Monitoring



Located along the Detroit River in the cities of Ecorse and River Rouge, Michigan, is **U.S. Steel – Great Lakes Works** steelmaking facilities. It is but one of five integrated steelmaking facilities in the United States. Manufactured products at this facility are used for the auto industry and include hot rolled, cold rolled, electrolytic galvanized, hot dip galvanized high-strength, and low-alloy steel. The current steelmaking capacity at this U.S. Steel location is 3.5 million tons.

In mid-2006 there was a requirement for three flow meters to accurately monitor discharge water in the 'hot roll' process at the facility where flat steel is turned into steel coils. The flow meters were to be installed on three 48-inch lines that discharged 50,000 gallons of water per day. Due to the less than ideal conditions at the sites, it was strongly preferred that a monitoring solution could be found that eliminated sensor maintenance as well as the personnel site visits for data collection.

Don Thayer, Manager - U.S. Steel - Water Compliance/Environmental Department, had been a long-time user of Marsh-McBirney flow monitoring equipment since the early 90's. Thayer had always been pleased with the Marsh equipment accuracy and reliability and for that reason requested additional information on their new offering known as Data Delivery Services (DDS).



Aerial View of U.S Steel Great Lakes Works

DDS is a new approach to sewer flow metering with all the innovation you've come to expect from Marsh-McBirney without the capital expense of actually purchasing flow meters. Customers receive accurate, reliable, unedited and repeatable data at the lowest cost possible through a 'hands-off' service that utilizes the award-winning Flo-Dar Radar Velocity/Area Sewer Flow meter. The non-contact Flo-Dar sensor eliminates sensor fouling in the rugged sewer environment by monitoring flow from above the flow medium and is accurate even during surcharge conditions. This revolutionary approach to flow monitoring has truly changed the way personnel in the flow monitoring field think about flow metering.

With DDS you only pay for sewer flow data and you don't have to leave your office to get it. DDS customers enjoy the added benefit of no unforeseen or hidden flow monitoring costs. Marsh-McBirney furnishes a web-enabled Flo-Dar sewer flow meter and all of the following benefits:

- 24/7 access to your unedited sewer flow data via web browser anytime/anywhere
 - Up to 95% data uptime guaranteed
 - Event notification/Alarms directly to your PDA, cell phone, e-mail, etc.

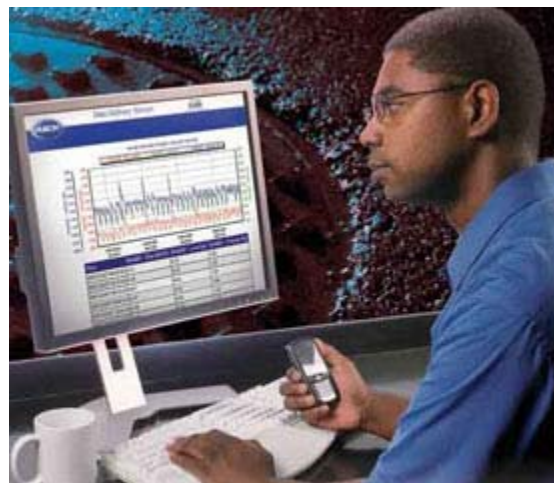
- Secure password protected access
- Factory certified installation
- Unlimited secure data transfers
- Daily data back-ups
- Live customer support

Already familiar with the Flo-Dar non-contact meters, Thayer adds, “We actually have a Flo-Dar meter out in our facility that we purchased outright. We still had to go to the site and get the readings but we only have to do that twice a week and the site is much more accessible. What we liked about the DDS meters is that we can just go to the website and get the readings. We can easily graph things for the past year, month or whatever we choose. We just look on the website and then we print out the graphs. We report the flows five times a week to the MDEQ State regulators for our NPDES discharge permit. It used to be that to get a flow for Monday we had to have somebody come into the plant on Sunday. Now, with DDS we don’t have to have anybody come in and get a flow reading on their day off. Now we just go to the website and look at the flows for the 24 hour period from Sunday to Monday. It’s quite a time saver.”

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When discussing other desirable features of the DDS program, he quickly added, “I don’t have to do any maintenance on the meters! For purchased meters we would still be responsible for that. Also, I like the fact that other people in the plant have access to the website to monitor the flows. When we installed the DDS Flo-Dar meters the mill was scheduled for a six-hour shut down. The certified DDS installation contractor, Marine Pollution Control, had to work swiftly to get into the confined space and get the meters up and running before mill operations were resumed. The meters were successfully installed and everything worked fine. Marsh-McBirney also sends someone out to change the batteries and that’s pretty nice too. Everything is taken care of for us with DDS.”

Dave Baker, DDS Business Development Manager, adds, “I am very proud to have been involved in the Great Lakes Works job for many reasons beginning with that the fact that I had the pleasure to get to know and work with Don Thayer. His knowledge of instrumentation is most impressive. When he and I first started planning this DDS project, the realization was that the Flo-Dar sensors were to be installed in locations that are difficult to gain access to. Two of the three sites required the sensors to be placed some 40 feet up into the underground channels that flow constantly and have no manhole access from above. This meant either entering the channels while they had water running through them or entering the channels during a rare scheduled plant shutdown. Fortunately, we were able to time everything properly so that the installation team could gain access to the channels during a scheduled six hour shutdown.” If the site would have not been able to shut down for the install U.S. Steel would



**Data Delivery Services provides accurate, reliable
flow data straight to the user’s desktop.**

have had to have an installation team float a boat up the Detroit River to enter the large rectangular channel. This technique would have proven to greatly increase the already hazardous installation. Dave adds, "The Flo-Dar meters were the only flow sensors that could have ever been considered for this application due to the inaccessibility of the sites." The DDS application is indeed strong testimony to the integrity and reliability of the Flo-Dar sensors themselves that make this hands-off approach to flow monitoring possible."

In closing, concerning his overall DDS experience, Thayer adds, "We have been treated very well and as for open channel flow monitoring, Flo-Dar and DDS is the best way to go!"