



Integrating the Load and Draft Monitoring Program to the US Hopper Fleet

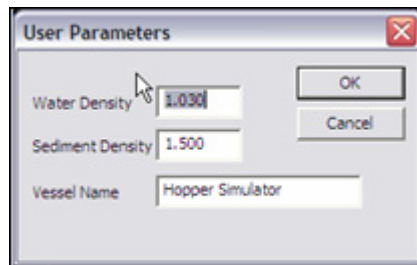
By Jerry Knisley

At the HYPACK® conference I spoke to Mircea about the Load and Draft Monitoring software that he has written for the hopper dredges. I think that it would be a nice addition to the hopper dredges here in the US and I have begun making changes to the SI_SENDER driver so that the integration will be seamless.

The LDM software is similar to the 24-hour graph that the SI_SENDER driver currently installs on the dredges in that it tracks the displacement over time. That is where the similarity ends. The LDM does so much more that the SI_SENDER driver cannot duplicate. When the LDM software is configured properly, it will track Tons Dry Solids, Cubic Yards Dredged, Displacement and display a few items that are already in the SI_SENDER driver.

In the LDM software, you must measure or estimate the INSITU density of the material being dredged and the density of the water.

FIGURE 1. *Entering Measurements in the LDM Software*

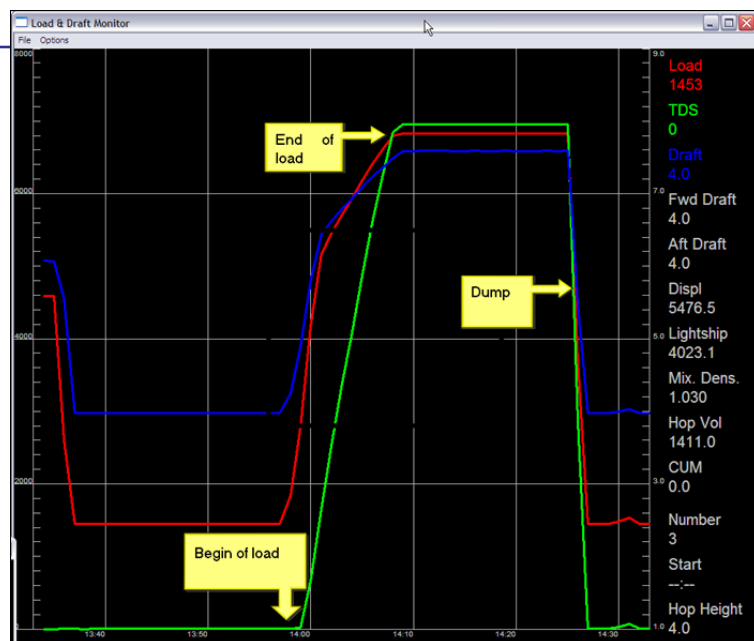


Modify the draft table to include draft, displacement and height of material from the keel in the hopper. So in the past we had two tables for the standard hopper dredge, there is a single table that must be converted.

FIGURE 2. *LDM Display*

The real time display for the LDM software is easy to read and color-coded. The LDM software can be run on the HYPACK® computer or a separate computer. When both HYPACK® and the LDM software are on the same computer, data can be passed from DREDGEPAK® to the LDM.

In case you are running the LDM software on a network computer, I am modifying the SI_SENDER driver to always pass the required string to the UDP port 5656. This will initially be hard-



coded. If the tests work, I may allow a bit more flexibility. For now it is better to limit the options.

FIGURE 3. Load Reports Web Page

The real advantage of incorporating the LDM software is that the load reports are stored on the web page within the computer for easy retrieval. There is a summary page for the entire day along with individual load reports. The files are small and do not take a lot of hard drive space.

When you install the LDM software, it configures the web page for you so it is not difficult to setup that part of the program.

Currently, the LDM software is not available on the HYPACK® release disk; you must request it from HYPACK. I am not finished incorporating the LDM to the SI_SENDER, but when I am, I will send it to anyone interested in trying the system out.



FIGURE 4. Sample Load Report

