



"The World's Leader in Portable Dredges"



156 Airport Road Reserve, LA 70084 ☎ (985) 479-1355 www.dscdredge.com

## **DSC TO EXHIBIT GREEN DESIGNS AT CONEXPO 2011 DREDGE MANUFACTURER INCORPORATES SUSTAINABLE DESIGN PRINCIPLES TO ENVIRONMENTALLY AND ECONOMICALLY IMPROVE PRODUCT LINE**

*For Immediate Release*

**RESERVE, LA – January 10, 2011:** Since the company's inception, sustainable design has been at the forefront of DSC Dredge LLC's mission as it is one of the most important ways for a dredge manufacturer to stay competitive and innovative. DSC is setting a precedent in sustainability by incorporating green principles in product design, optional system upgrades, and even throughout the company's construction and operation processes.

### **Product Design**

DSC promotes the use of electrically-powered dredges whenever practical. As the largest manufacturer of electrically-powered mining dredges in the U.S., approximately 60% are currently being designed to be powered by electricity from shore. These dredges utilize high efficiency variable frequency electrical drive systems to additionally enhance the efficient use of energy. The electric dredges are basically powered from a large scale extension cord without the use of any diesel equipment, which reduces fuel dependency.

If an electrical dredge is not a feasible option for your operation, you can still benefit from one of DSC's many green designs. As one of the only dredge manufacturers to incorporate PLC-based operating systems, which are fully designed and programmed in-house, the Company uses this technology to monitor dredge activities and maximize the operation's efficiency. For example, DSC's *automated flow control system* will increase and decrease dredge pump speed to control a constant flow rate based on user-defined parameters. The pre-selected flow range is controlled by the output data from the velocity meter controlling the dredge pump motor for automated increase/reduction in speed to hold a constant flow rate. This system allows the prime mover to perform at peak efficiency, while reducing energy usage. Since the system automatically adjusts the pump, it also allows the dredge operator to be more productive by allowing him to focus his attention elsewhere.

DSC's PLC-based control system has safety related advantages too. The control system protects against pump engagement and disengagement at high speed and locks out all hydraulic functions during start-up and control activation. The system will also alarm the operator on electrical faults, hydraulic problems, and any other potential failure.

-more-

*Interviews, Photos, and Graphics Available Upon Request.*

**Media Contact:**

Lara Lightsey for DSC Dredge LLC - [LKLightsey@dscdredge.com](mailto:LKLightsey@dscdredge.com)



"The World's Leader in Portable Dredges"



156 Airport Road Reserve, LA 70084 ☎ (985) 479-1355 [www.dscredge.com](http://www.dscredge.com)

Efficiency does not end in the design of DSC's equipment; the standard dredge control system logs and displays operating hours of all major equipment including the dredge pump, cutter, swing/positioning winches, stern winch, and ladder winch. This valuable data can be used to develop a well-planned maintenance schedule. The data is useful for servicing and managing dredge utilization, allowing scheduled maintenance to be planned with equipment operating hours in mind.

DSC recently launched a new innovation to their existing dredge operating system known as RDM (Remote Dredge Monitoring) Technology. This advancement is now a standard feature among all DSC's PLC-operated systems. RDM, as its name suggests, provides remote dredge monitoring capabilities using cellular, WAN, LAN, or WIFI connections. For cellular connections, the dredge owner simply subscribes to a cellular data plan to access the dredge remotely using standard local cellular services. Then, during dredging operations, RDM allows dredge managers to view live data from any remote location in the world via the internet using a standard web browser. The web browser displays screen views identical to those of the HMI (Human Machine Interface) touch screen located at the dredge operator's station. RDM also allows dredge managers to view or download log files remotely. If the dredge is outfitted with a Production Meter System and RDM Technology, you can practically check your production rate from anywhere in the world!

DSC dredges also come standard with *integrated load-sensing pressure compensated hydraulic components*. This style of hydraulic system means the system only generates the hydraulic flow necessary to operate the system components at the speed set by the operator and the pressure demanded by the task. Since no oil is bypassed back to the tank or throttled by pressure regulating valves, the major source of heat generated in a system, the system operates with increased efficiency and at cooler temperatures. This not only reduces the power consumption, but also reduces required cooling, tank capacity, and filtration. In a typical hydraulic system where 50% of the system's flow is demanded and 75% of the pump's pressure is required for the task, a conventional fixed displacement system (found on older portable dredges) will consume 75% of the pump's power, while a pressure compensated system (found on modern dredges) consumes approximately 50% of the pump's power. In contrast, DSC's hydraulic systems consume only 37.5% of the pump's power. The lower power consumption equates directly to operational cost, even on smaller dredges, resulting in dramatic energy savings. In addition, the more efficient components used on DSC's hydraulic systems have a longer lifespan, which reduces operational maintenance costs and increases your business' bottom line.

-more-

Interviews, Photos, and Graphics Available Upon Request.

**Media Contact:**

Lara Lightsey for DSC Dredge LLC - [LKLightsey@dscredge.com](mailto:LKLightsey@dscredge.com)

## System Upgrades

Other sustainable designs include *hydraulically-driven AC generators* that allow the generator to maintain 60Hz (or 50Hz), so the auxiliary engine does not need to run at full speed in order to generate AC power. *Variable speed capability* is provided on service water pumps to lower its speed and power consumption during periods of low dredge pump discharge pressure. Both features allow for energy conservation and efficient system design.

DSC's *Maximizer suction relief system* is designed to assist the operator in achieving maximum production while reducing the chance of a plugged line. It incorporates a pneumatically controlled butterfly valve that is plumbed into the suction of the dredge. This system automatically responds to suction problems, including vacuum (differential pressure) and discharge pressure. In order to maximize its productive use, desired points to activate the suction valve can be adjusted through the PLC. In addition to dredge vacuum, which is primarily used to control the Maximizer, the system is designed to utilize data from discharge pressure, flow meters, and production meters. These additional options allow the operator to choose further set points and alarms to control the Maximizer such as flow, velocity, and density.

## Construction and Operation

DSC's sustainable practices extend to all facets of the Company. The Engineering Department uses in-house simulation tools, 3D modeling, and finite element stress analysis software combined with years of experience to offer a total engineering experience to all its customers. The use of these tools results in lighter but stronger designs (lowers consumer costs) and fewer mistakes, which reduces waste.

Over the years, the company has developed a mindset to reduce, reuse and recycle whenever possible. The life of a sheet of paper at DSC is long-lived; the company generally uses both sides of paper before shredding it and using the shredded paper as packing material in their shipping/receiving department. As a result, the company rarely needs to buy packing material and creates little trash. Paper and plastics are recycled in comingle bins throughout its facility, while scrap steel is reused. The corporate office even has a printer cartridge and cell phone recycling program that benefits St. Jude Children's Research Hospital through the Funding Factory ([www.fundingfactory.com](http://www.fundingfactory.com)).

Long before "green" became a trendy buzz word, DSC constantly looked for more efficient ways to operate. The company has incorporated several programs into their everyday operations to reduce and reuse, including the use of old tires as bumpers on dredges to engineering research on the most efficient components. From simple recycling programs for paper, printer cartridges, and steel scrap to reducing a client's fuel dependency, DSC is always looking for greener ways to operate and hopes to set an example in sustainable practices.

-more-



"The World's Leader in Portable Dredges"

156 Airport Road Reserve, LA 70084 ☎ (985) 479-1355 [www.dscdredge.com](http://www.dscdredge.com)

Visit DSC at this year's **ConExpo – Con/Agg event in Las Vegas at Booth #C-6111** to see how the company is improving their products and operations, while reducing their carbon footprint. DSC Dredge LLC, a world leading designer and manufacturer of cutter suction dredges and underwater pump mining dredges, has major manufacturing facilities located in Reserve, LA, Poplarville, MS, and Greenbush, MI. For more information about the company and their products and services, please visit them at [www.dscdredge.com](http://www.dscdredge.com).

###

*Interviews, Photos, and Graphics Available Upon Request.*

**Media Contact:**

Lara Lightsey for DSC Dredge LLC - [LKLightsey@dscdredge.com](mailto:LKLightsey@dscdredge.com)