Just when it appeared that there might be a decent grain movement on the Canadian side of the lakes this autumn, everything went flat. During September, most idle vessels were fitted out and almost the entire Canadian fleet was in service, including some ships which observers might not have expected to run. After only a few weeks of such activity, however, the St. Lawrence River elevators were full and almost no grain was being shipped out overseas. Lakers went to anchor to await space in the elevators, or were diverted to various ports to lay up pending resolution of the situation. At Toronto, SEAWAY QUEEN and CANADIAN HUNTER laid up with cargoes during the first half of October (although the latter sailed again on the 26th), and STELLA DESGAGNES went to the wall light. SCOTT MISENER, which never did fit out, was towed to Victory Mills to load a storage cargo of Ontario soya beans, and SENNEVILLE, which spent the summer on the Port Weller graving dock undergoing very extensive hull renewal, was towed back to Toronto on October 11 (by W. N. TWOLAN and ARGUE MARTIN) without ever returning to active service. Although it was hoped that the Wheat Board might soon arrange a large foreign grain sale, nothing had developed by the time of this writing, and only U.S. export grain was moving in any quantity...

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## CSL INNOVATOR

The Panamax-type, self-unloading bulk carrier CSL INNOVATOR, converted at the Verolme Estaleiros shipyard in Brazil, was christened on April 19, 1988, and has since been operating in a variety of trades. The June-August, 1989, issue of "Seaway Review" reported full details of the equipment fitted in CSL INNOVATOR, and although the ship will never be able to enter the lakes on account of her size, we believe that information concerning the conversion will be of interest to our readers in that such self-unloading gear will, no doubt, be seen on the lakes before long.

CSL INNOVATOR carries an articulated unloading boom, the first of its type ever used in a ship. The boom, designed and patented by Canada Steamship Lines, is 76 metres (249 feet) in length, and when the ship is loaded, the boom can extend 60 metres (197 feet) outboard from the ship's side and can be raised 30 metres (98 feet) above the water line.

The proximal portion of the boom, hinged against the forward side of the stemwinder's cabin, can be slewed from side to side through a range of 200 degrees. The boom is hinged at mid-point, and the somewhat lighter distal section can be swung through a range of 300 degrees, and also can be raised 18 degrees above the horizontal or declined by up to 15 degrees. This unusual boom arrangement allows for great flexibility in unloading and permits the ship to unload easily at places that would be inaccessible to normal self-unloaders, and to avoid the necessity of moving the ship frequently during unloading operations. It also facilitates the movement of cargo from place to place within the ship's own holds.

The three conveyors that run beneath the cargo holds are served by basket-type gates which remain fully open during unloading to permit an even flow of cargo onto the belts. The basket gates are designed to reduce cargo surges and back-ups. The holds are lined with a special polyethylene coating to reduce friction, and also feature a unique hydraulic vibrating system designed to aid in cleaning the cargo areas.

The elevating system includes two pocket-belt elevators built to minimize and contain spillage, and feature variable-speed capability permitting discharge at any rate up to 4,500 tons per hour as may suit the receiving facility. The elevating system can be started or stopped with a full load on the belts.

The first of the new "Panamax" self-unloaders being built for C.S.L. at the Verolme Estaleiros yard (located on the Bay of Jacuacanga, some 75 miles south of Rio de Janeiro), should be completed and in service before the end of 1989. Three more 68,000 d.w.t. sisterships are to be delivered during 1990, and one additional vessel during 1991.

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