CALEY CTD HANDLING SYSTEM WINTER 2011
R/V HUGH R. SHARP

The Caley CTD Handling System on the R/V Hugh R. Sharp continues to be a functional system, but deficient in some of its design criteria. This sailing season will be the sixth year with the system on the ship. Overall, the deployment and recovery design of the system continues to work as intended. This part of the system has been accepted by science and has added a level of safety to the deployment and recovery of the Rosette. It functions as a hands free instrument deployment device with the technician needing only to release the Rosette from its secured location under the docking head and re-securing it upon recovery.

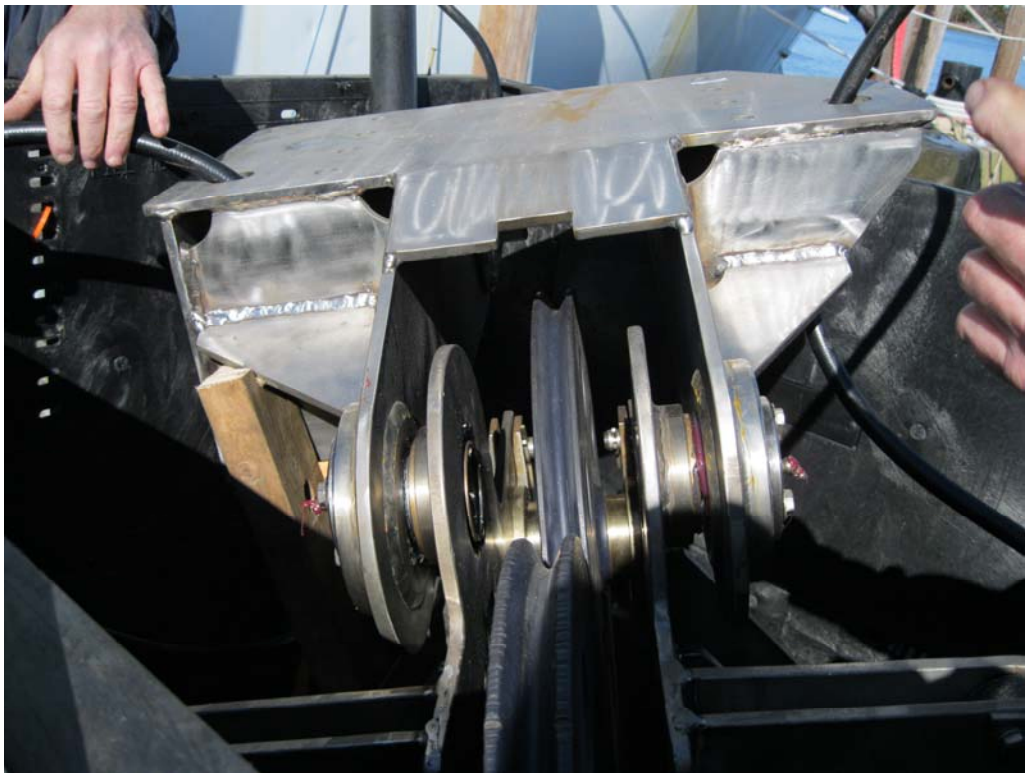
The R/V Sharp was funded through our SSSE 2010 award to have an outside vendor, Rapp Hydema, service some parts of the deployment system. Problems had developed with the synthetic bushings on all the sheaves and flagging assemblies. We provided the synthetic bushings to Rapp Hydema before the service call so several could be fabricated in advance of the service call. Two Rapp technicians attended the Ship in the fall of 2010 in Lewes, Delaware. Progress was made with the replacement or repair of the damping hydraulic cylinders, the replacement of several ball joints and the bushing replacement. A local machinist company was also utilized to make some additional bushings and other required parts. A new stop was fitted against the inside leg of the crane assembly to prevent the unit from swinging too far inboard. These improvements brought the mechanical side of the system up to par.

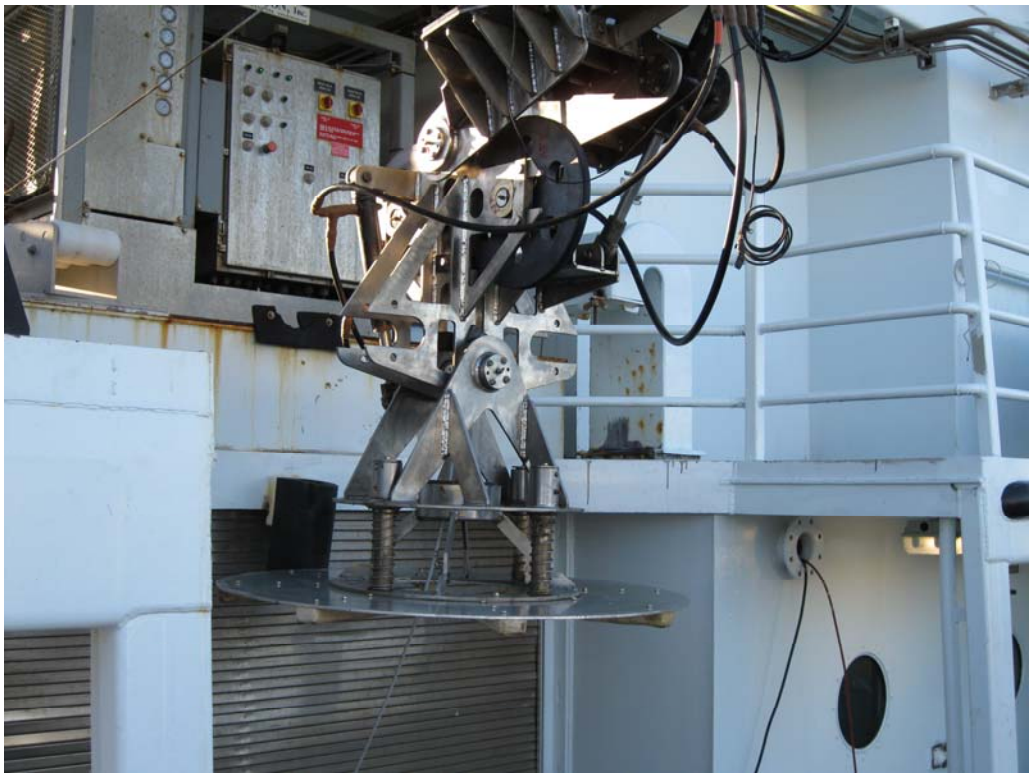
Our lead technician, Tim Deering, continues to work with Caley on software issues. We were able to repair a software problem that prevented tension from appearing on the bridge display. We are prepared to install a proportional valve, but have not been given the proper software updates by Caley.

In January 2011, we contracted with Rapp Hydema to build a stainless steel docking head assembly to replace the existing steel docking head. We removed this portion of the unit and shipped it to Seattle to be used as a guide for the new construction. We have requested a stainless steel docking head in the R/V Sharp SSSE 2011 proposal, but thought this improvement was important enough to proceed with construction, regardless of funding sources. The new docking head was delivered in February and is installed on the vessel.

We continue to have issues with the motion compensation component of the system. Caley's response to requests for assistance is unreliable at best and more often than not, just ignored. This is not a problem with the system, just the vendor.

Pictures attached.



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