Newsletter – *July 2015*

ASB Systems Pvt. Ltd.

Work hard, work smart!

"*Victory is always possible for the person who refuses to stop fighting*." – **Napoleon Hill**

Isn't it amazing how mankind strives to overcome challenges thrown at them by nature? When man realised there are limitations to how far sound can travel in air, he developed phones. When man realised that he cannot "see" much inside water, he started using Sonars. Man has intelligently found out ways to achieve the impossible…right from "hearing" natural sounds like snapping shrimps using passive hydrophones, to using high powered Air-guns to detect Oil and Gas reserves deep inside the Ocean's belly.

In today's world, work hard-work smart is the new mantra. Using social networking to stay in touch with near ones, "Googling" for information and other such life-hacks are smart ways to live.

Consider the world of Dredging –
Where the toughest dredger could get its teeth knocked out, literally, due to a buried rocky outcrop.
Or a dredger being rendered ineffective due to a large fluid mud patch.
Dredging has to be carried out in a location swarming with subsea cables and pipelines
A sand reserve is to be excluded from the dredging area, so that it can be extracted seperately later.

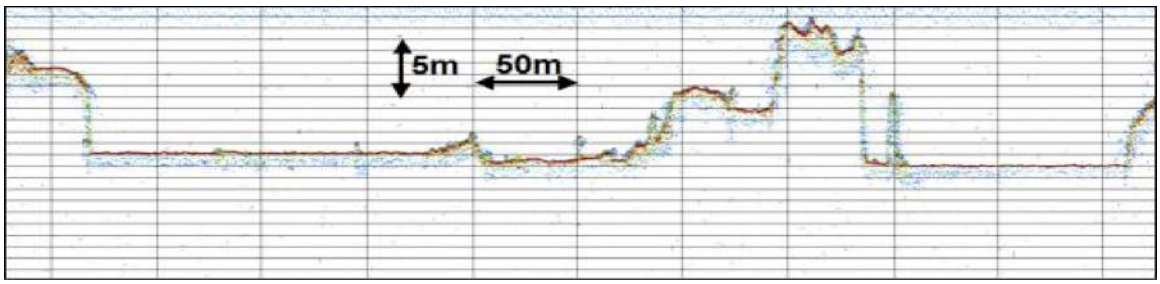
This is where "working smart" comes into the picture…there's always a smart way out!!

In this issue…

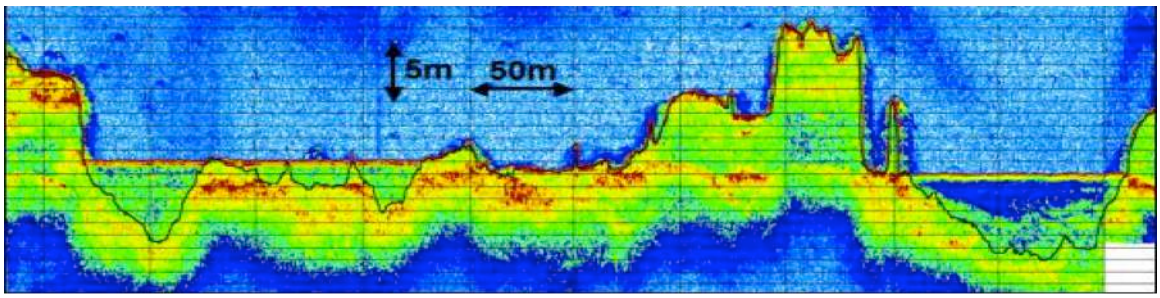
Dread to Dredge, or Dare to Dredge

Did you get the above tongue twister right? :-p

Innomar manufactures parametric sub-bottom profilers that are used to visualize sediment structures or objects within the seafloor. This is especially of use in Dredging applications due to its ability to detect the presence of hidden rock outcrops that can severely damage dredgers.



HF data, frequency 100kHz; bottom track shown as red line



Innomar Data: Bottom track shown as black line; Fluid mud layers are identified better with the Innomar

In 2000 in India, Ballast Nedam Dredging first used the Parametric Echo Sounder (SES-96) from Innomar. In the search for a suitable instrument to investigate the top-layer of the sub-bottom, several seismic systems proved unsatisfactory for the dredging industry , where a good resolution in the first metres is essential. After a trial in India with the SES-96, BND purchased the system later that year. Since 2000, Innomar SBPs have been implemented on various projects in different parts of the world and in many types and combination of soils, one of them being the Dubai Palm project.

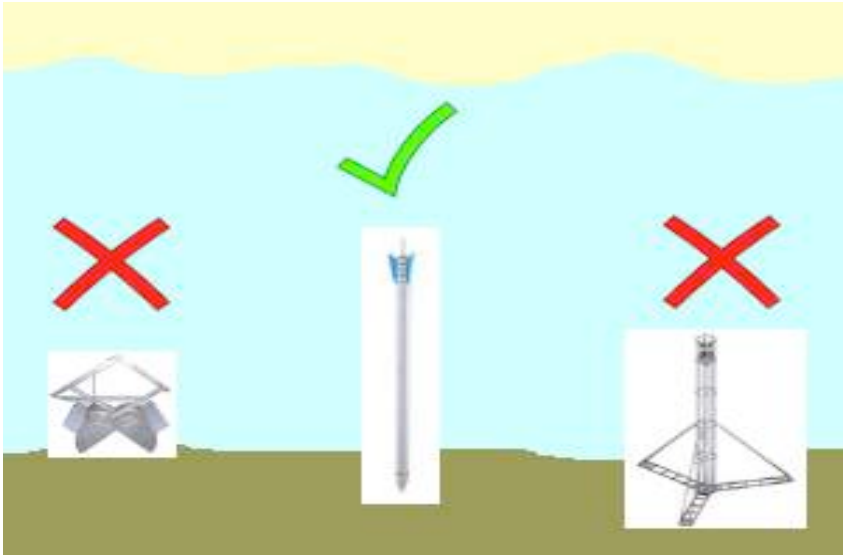
Mainly used by dredging companies, general survey companies and waterway and shipping offices, the system is used for a great variety of applications in the marine field by customers worldwide. Some of the major applications are:

. determination of the water depth with high accuracy
. detection of fluid mud layers and dredging levels below siltation
. surveying of the morphology of the bottom surface and sediment structure
. determination of boring points during soil investigation campaigns
. search for mineral resources and sand dredging areas
. search for embedded pipelines, sea cables and stones and monitoring of their coverage
. marine archaeological investigations of wrecks, historical buildings and settlements.

Sedimen-tension?

Consider this scenario: A colossal dredger has been contracted at an equally colossal rate to dredge. Even after incessant dredging, there has been no significant change in the depths. The dredger is riddled with mechanical break-downs frequently. The Dredging company is a reputed one, but the results don't show. The customer blames the consultant, and the latter blames the Dredging company. Penalties get levied, the Dredging company cries foul, unhappiness prevails. Sounds familiar?

Well, everybody does a pre-survey…so what went wrong?



.Ocean
nautical innovations

Surveys – No ground truthing using actual bottom samples

Grab sampler – Can collect samples only from the surface. It is ineffective for Fluid mud.

Vibrocorer – Can collect samples 3-6m below the surface. Again, ineffective for fluid mud, is time consuming and expensive.

Graviprobe – the smart way for pre-Dredging assessments

1. Can distinguish between Fluid and consolidated mud
2. One-man deployable from a small boat
3. Up to 50 points can be collected in a single day
4. Rocky outcrops are identifiable
5. Simple to use

The GraviProbe Rheology is a free fall impact instrument, analyzing the underwater sediment layers during intrusion. Under its own weight it accelerates and penetrates fluid and consolidated mud layers. As a result the GraviProbe Rheology is able to distinguish the depth of the fluid mud and consolidated mud layers very accurately, even in gassy environments.

Due to its light weight the probe can be operated manually from a small vessel, platform or quay and limits the operational costs.

Overseas training

True to its commitment to stay abreast of latest technology, the company deputed its fellow ASBians for overseas training at the OEM facilities.

dotOcean, NKE Instrumentation and Innomar company visits enhanced the product knowledge of these engineers, which they happily shared with their colleagues upon return.

Training at OEM facilities provides an insight into the technology and manufacturing process which makes the end-product a reality. The engineers not only got a hands-on opportunity to operate the instruments, but were also trained on the theory, service and maintenance aspects to be able to provide valuable services to our customers here.

Lunch with a punch !!

The Japanese restaurant round the corner buzzed with activity, as ASB staff welcomed the monsoon (as if we needed a reason!) with an impromptu lunch treat.

Basil cups, Tempuras, Momos, chicken wings, calamari and shrimps and other culinary delights were devotedly guzzled down with mocktails and beers !

Happy Monsoon!