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GEA Supplied First Container Skids

With two centrifuge skids for the treatment of so-called drain water, **GEA**, Business Unit Mechanical Separation, recently delivered the first retrofit plant. Whilst drilling for oil, drain water collects on the platform in large volumes, which is passed into large tanks together with other waste water occurring. In conformity with the IMO Regulations MEPC.107(49) this contaminated water must not be drained into the ocean before corresponding treatment and de-oiling. The disposal of drain water on land is associated with high costs and expenditure of time so that a corresponding treatment is necessary by separation on the drilling platform already. For this reason, the use of drilling platforms in the waters of Alaska required a retrofit of the drain water treatment plant, which ensures residual oil content in the drain water of less than 5 ppm. For this purpose, the company has



GEA recently delivered the first retrofit plant to a drilling platform in the waters of Alaska

designed a plant with a high performance decanter for solids extraction as well as a separator for residual oil removal. The special feature here is the retrofit concept: Both centrifuges including peripheral equipment were delivered in one container each ready for operation.

After the customer has fitted the supply line, the skids can be put into operation directly on deck, by "plug&play" so to speak. This possibility of retrofitting convinced the customer not only by its uncomplicated handling, but also by its enormous cost and time benefit. ■

APATEQ Presents Innovative Methods

"OilPaq" is an effective method for treating fracking flow back water as well as upstream produced water generated from oil production with on single device. The treatment takes place by turn-key plants directly on-site, at oilfields on- and off-shore, thus saving expensive fresh water and produced water storage

and transportation costs. Delivered either containerized or in rack-mounted modules, OilPaq combines **APATEQ's** proprietary primary treatment process, achieving an oil and total suspended solids removal rate of up to 90 percent, with a subsequent proprietary cleaning by specially conditioned organic or

ceramic membranes to generate high-quality water suitable for e.g. re-use in fracking operations or for re-injection to achieve enhanced oil recovery. With an additional post-treatment it could either be used for direct discharge, irrigation or as process water. The company uses membranes that do not clog and last many months before they need to be cleansed. Even with varying composition of produced water, the results of the treatment technology show less than 1ppm of both, free hydrocarbons and suspended solids. It requires no or very small amounts of chemicals in comparison to existing processes and 100 percent of the oil that is separated from the raw water can be directly processed in refineries instead of having to be burned, buried or otherwise disposed of. OilPaq can easily be remote-controlled and -monitored by pc or smartphone with an app showing the graphic user interface of the plant. ■



Pilot testing of OilPaq container at oilfield in the USA