

# DuPont™ ISCEON® MO99™

## CASE HISTORY

### DuPont™ ISCEON® MO99™ Effectively Replaces R-22 in Refrigeration and Air Conditioning Systems at Edison Chouest Offshore



#### Background

Edison Chouest Offshore (ECO) is a technologically advanced and fast-growing offshore vessel service company founded in Galliano, Louisiana, in 1960. The company owns and operates a fleet of new generation offshore service vessels and a large fleet of research vessels.

The HVACR systems in ECO vessels are designed, built and operated by Sealand Mechanical, L.L.C., based in Houma, Louisiana. Sam Sanderson, General Manager at Sealand Mechanical, founded Sealand in 1985 to service the HVACR systems of offshore vessels.

Sam and his colleague, Marty Rohlfs, have been designing and servicing HVACR systems since the early 1970's. Sam and Marty began looking for a non-ozone-depleting refrigerant to replace R-22 because many of ECO's customers are looking for R-22 alternatives.

Eddie Gallego, Baker Distributing, helped Sealand to identify R-22 retrofit options. Eddie heard about the features of ISCEON® MO99™ and thought it might be the perfect solution for ECO. ISCEON® MO99™, developed and patented by DuPont, combines R-22

pressure-enthalpy characteristics with mineral oil compatibility in a unique HFC refrigerant that can be used to replace R-22 over a wide range of evaporator temperatures.

#### Project details

Ship 237, named the Dino Chouest, is a 348-foot vessel that provides support to oil drilling rigs around the world. The Dino has 17 refrigeration and air conditioning systems including: five 15-ton A/C split systems; a large 106-ton A/C system; a 25-ton comfort cooling system for the control room; and several walk-in coolers and freezers using Copeland® brand compressors. All of the components including very long line sets, condensers, evaporators, and TXVs are sized for R-22.

#### Results

ISCEON® MO99™ was installed in all 17 new refrigeration and air conditioning systems. The pressures were very similar to R-22 and, as a result, there was no overheating of compressors as had happened in the past. The expansion valves did not "hunt" on start-up, which was a tremendous improvement over other refrigerants.

A controls application engineer who monitored the HVAC systems after the retrofit said, "ISCEON® MO99™ ran so close to R-22 that unless you knew ISCEON® MO99™ was in the system you might not even detect the small differences."

In addition, oil return was excellent on all 17 systems.

#### Conclusion

Sam was pleased with the start-up using ISCEON® MO99™. "We were happily surprised that everything went so well."



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For more information on DuPont™ ISCEON®, or other DuPont Refrigerants, please contact your local representative.

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K-22312 05/09