



Background:

A highly innovative oilfield technology company specializing in electrically powered systems for frac spreads envisioned a new operational pad configuration, and contracted with a motor and drive manufacturer to develop a smaller, lighter, and more mobile system for high pressure fracturing pumps.

The project required re-imagining all facets of a traditional system, including how to achieve low radiating motor noise levels. The motor manufacturer, however, did not conduct sufficient in-depth modelling and testing, and the motors consistently experienced excessive overheating problems throughout development. The manufacturer was ultimately fired.

Challenge:

Supply 5,000HP with a low acoustic signature to two (2) 2,500HP frac pumps, on a single mobile trailer, within a 5-foot high profile – and ensure the frac trailer weighs less than the acceptable limits set by North American highway transportation authorities.

Solution:

The company interviewed key motor manufacturers and selected Ward Leonard because its strategic analysis included every component of the entire “loaded” trailer.

The result: instead of utilizing an expected twin horizontal 2,500HP motor alignment, or stacking the motors on top of the frac pumps, Ward Leonard designed a single, multi-shaft, VFD-rated medium voltage 5,000HP motor that featured a higher ratio of copper for enhanced efficiencies, and a channel cooling strategy with multiple modulating blowers.

The frac trailer is now lighter, slimmer, more mobile and frees up space for other equipment as needed.

Ward Leonard is an industrial technology company that develops highly engineered, integrated motor and control solutions for complex Heavy Industry applications. For more information or to speak with one of our engineers, visit us at www.wardleonard.com.

Purpose-Built Fluid Pump Motor Solutions for Electric Frac Spreads

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