

Staying On Top

BERARD TRANSPORTATION, INC. developed from a traditional house moving company in to a high-tech 21st century structural mover. Offshore structures, heavy industrial equipment and ships have replaced much of the houses and buildings from the past. And so did the hydraulic modular trailer. It took over much of the role of the dolly. By adding the latest generation of Goldhofer SPMT, Berard further strengthened its position, as GINO KOSTER found out.

Adapting to market opportunities

Surrounded by farmland the Berard Transportation Company is located in New Iberia, LA. It was here that Roy Berard Sr., a struggling sugar cane farmer, started a house moving business in 1945. As the company website tells, Mr. Berard Sr. moved his first house on behalf of a friend in just one day. He used a truck and a homemade trailer. The job not only earned him \$50.00, a fortune at that time, but also made him known in New Iberia as a house mover. Gradually house moving took over from farming. Over the years Berard further specialized in structural moving, especially the moving and jacking of large buildings. The company earned such a reputation that when the growing oil business in the Gulf required the services of a heavy transportation specialist, Berard was ready to make a new move.

Development of oilfields offshore started the construction of jackets, modules and deck structures

in the greater New Iberia area, along the Mississippi River and Intra Coastal Waterway. The entrepreneurship and vision of Berard got the company involved in the offshore business. The work included both on-site shifting and load-out onto barges of offshore oil structures. Dimensions and weights were outgrowing the capabilities of the standard hydraulic dollies used for house moving. Therefore 24 two-axle dollies, built by Modern Hydraulics, extended the fleet. Berard equipped the 75-ton capacity dollies with 6- instead of 4-wheels per axle in order to better cope with the soft Louisiana soil on many of the offshore yards. The dollies were designed to operate in a modular-type set-up, creating a total capacity of 1800 ton. Soon the capabilities of the dollies also proved their worth when floating casinos where built on land, like Harrah's 1200 ton 'Southern Star'. The Berard crew put the casino on ten dual-dolly set-ups, moved it on site and loaded the structure onto a floating dry-dock for final launching. The dollies developed to the cor-

The complicated 600-ton Vintage deck featured a centre of gravity far off-centre.



ner stone of the company, as Berard's creativity also found many applications in the transportation of power equipment, such as transformers, and petrochemical equipment like reactors. But despite the effectiveness of its dolly system, Berard kept a close eye on market developments. The conventional drawbar-type modular hydraulic trailer from Europe, equipped with hydraulic axles and hydro-mechanical steering, also entered the US market and especially neighboring Texas. Berard saw the potential of the modular trailer and contracted a number of projects in the power and petrochemical segments by renting modular trailers. Once the conventional modular trailers could be equipped with a power pack and a self-propelled trailer module, Berard was among the first companies in the US to buy such trailers. They added a total of 12-axle lines and two power packs to their fleet, all PST/SL and THP/SL-type manufactured by Goldhofer from Germany.

Berard often uses their drawbar-type Goldhofer THP/SL for road haulage, like this bulky boiler.





Goldhofer's philosophy is to offer the E-type as a possible extension to both self-propelled PST/SL and conventional THP/SL trailers. In this way, especially, existing customers can use the E-type more efficiently as either stand-alone, with full SPMT capabilities, or in combination with their existing trailers, but limiting the steering options. Goldhofer claims to have 6500 'SL'-axle lines in operation worldwide. To achieve the matching and the fitting in of 2 x 135-degrees (270-degrees) steering axles, Goldhofer re-designed its trailer frame. The E-type remains 3m wide. With a minimum loading height of 0.92m (+0.60m) the trailer deck is only marginal higher (+0.045m) compared to the SL-type, requiring some filling out if and where necessary. There is no adaptor needed for coupling the different trailer types. A wider deck and a lower deck height, compared to the SPMT, result in more trailer stability. In addition the stronger frame also allows for higher point loads and offers an axle load of 36 tons. Goldhofer's E-type features Electronic-Multi-way-Steering (MWS) offering 12 computer controlled steering directions, including carousel (360-degrees), transverse (90-degrees), crab or diagonal (45-degrees) and combinations with non-coupled trailer modules.

Goldhofer's new E-type concept fitted well within the innovative ideas of Berard. The company was the first client to order a total of 28-axle lines of PST/SL-E for delivery in the second half of 2004. The order included two 6-line and four 4-line trailer modules and three power packs. Meanwhile the trailers have been used extensively in many situations and configurations as the following job details will explain.

Optimizing versatility

Since their arrival in the US Berard has put the trailers to the test on a number of projects where

Continuous innovation

While conventional self-propelled modular trailers were widely accepted in the US, another type of hydraulic modular trailer, the SPMT, was already well on its way to setting a new world standard. The Self-Propelled Modular Transporter (SPMT) mainly differs from its conventional self-propelled one in that it measures only 2.43m wide (container size), offers multi-directional steering on all axles with 360-degrees operation and has a minimum loading height of 1.20m (+0.60m). Although the SPMT allows coupling to conventional modular trailers, using an adaptor, in practice it is not functional. Whereas the three main European manufacturers, Scheuerle, Kamag and Nicolas, all part of the Transporter Industry International Group (TII), produced the container sized SPMT, Goldhofer went in a different direction.

In 2004 Goldhofer introduced the PST/SL-E. This fully electronic (E) type, based on the successful PST/SL and THP/SL trailers, offers the capabilities of an SPMT. But there are major differences.



Whatever the position of the individual trailers, like the ones in the back, Goldhofer's computer Multi-Way-Steering allows for moving in the required direction.

Moving a set of 200-ton manifolds required the use of two 4-line Goldhofer PST/SL-Es, only connected to each other by computer.

they could prove their worth using the typical capabilities of the trailers.

In Bayou Vista, LA, the load-out of two manifolds, each weighing 200 tons, was complicated because of the shape of the load and the location. A conical part underneath each manifold required using two separate 4-line PST/SL-Es, both equipped with a power pack. The obstacle allowed the trailers to be maneuvered underneath each side of the obstacle for about 3ms, leaving the 6m cone free. The freestanding trailers could only be connected via a computer. In this way both loads were maneuvered from inside the fabrication hall, using fully synchronized crab steer, via two 90-degree turns on the yard, on to the awaiting barge.

The Port of Iberia, LA, was the scene of another load-out involving a 250-ton jacket and a 450-ton deck. Both loads required the use of two 14-line PST/SL-Es. The jacket was loaded by positioning the trailers underneath the jacket, about 8ms apart. Because the final position on the barge required turning the load through 90-degrees, the non-connected trailers were set in carousel mode and rotated the jacket on the spot and into the right direction, before driving on board. While this operation required just one day, the deck could be moved straight out onto the barge the next day.

Another jacket, this time 30m long and weighing 500 tons, had to be turned through 180-degrees in the customer's yard in Houma, LA, before loading out onto a barge. The yard was less than 40ms wide. Because of the length of the load Berard needed two 28-line trailers. Here the advantage of the unrestricted coupling came into play as they used a

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The rotation of a 500 ton and 30m long jacket through 180-degrees on a 40m wide spot required two 18-line trailers. Two 4-line conventional THP/SLs were used as spacer.



A 250 ton jacket is rotated through 90-degrees on a set two 14-line Goldhofers.

