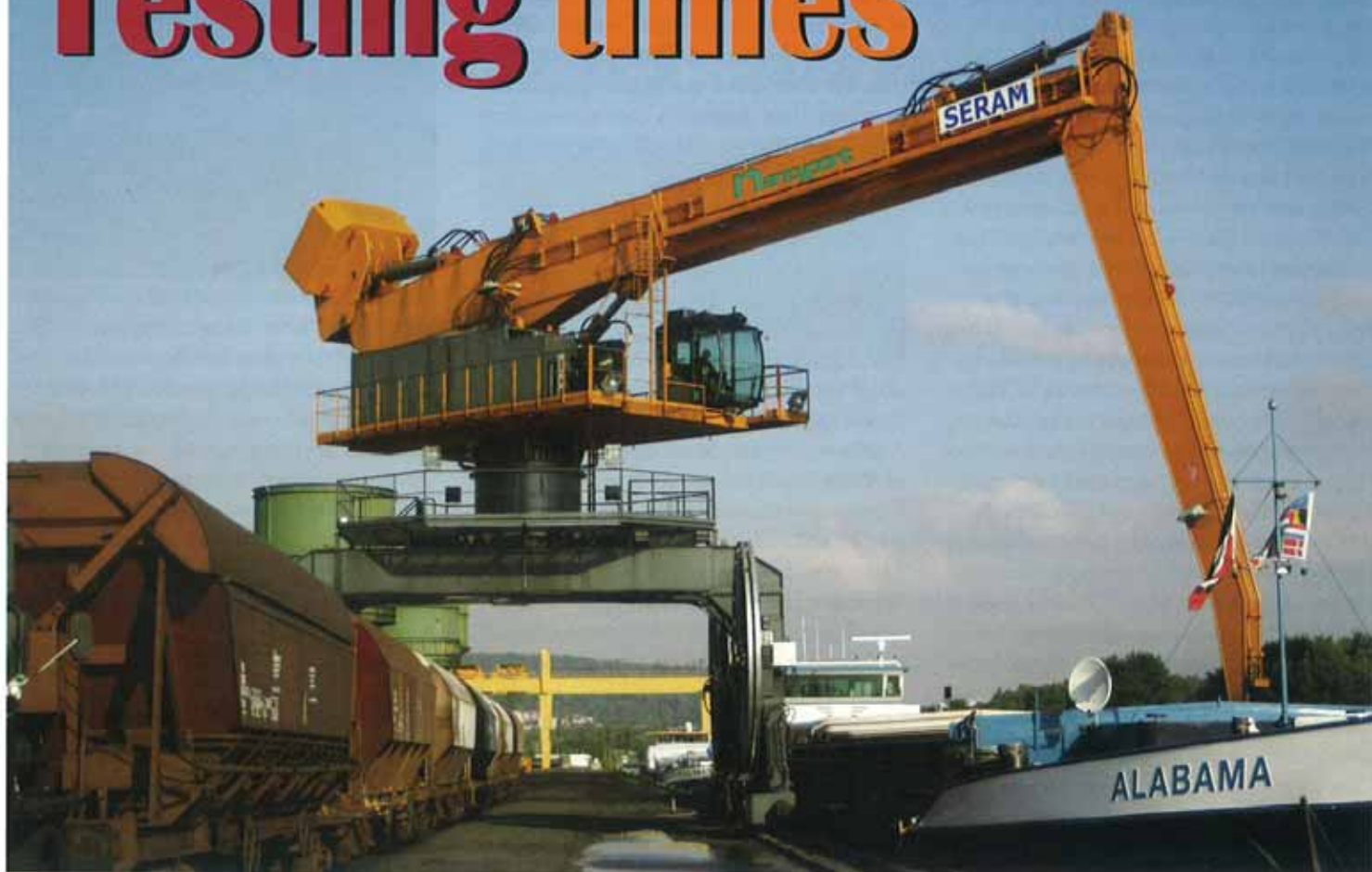


# Testing times



*The perilous economic times gripping the globe are testing the stability and even keel of the world of balanced cranes as Ray Dykes discovers...*

**T**wo major equilibrium crane makers report that while they are still busy, the first signs of the economic tough times are being felt as projects already past the contract signing stage have been put on hold. The slow down hasn't brought layoffs to either of the big two – the Seram Group of France and E-Cranes Worldwide of Belgium – but there are signs of furrowed and worried brows just the same. Luckily equilibrium or balanced cranes have been riding a world-wide trend in growing popularity as aging conventional cranes are replaced by their more efficient and much more environmentally friendly alternatives. The world market doesn't have too many alternatives when it comes to balanced cranes. The Seram Group, which invented the concept back in 1973, still claims to be the world's largest maker of equilibrium cranes, but there are indications that E-Crane International, with its bigger crane sizes, is

moving up fast. Seram Project Engineer, Pauline Julia, in Perpignan, France, responds to a question if the company is being impacted by the tough economic times with a question of her own: "Who is not?" She adds that a few orders have been placed on hold. Over in Galion, Ohio, where E-Crane International USA has moved to a spacious new facility, President Mark Osborne, explains that some projects have slowed down or been put on hold. "The steel business has gone soft worldwide," he says. One E-Crane project shipped in November went ahead although its buyers will simply put it into storage for the time being once it arrives. "This is unheard of in our business; you make an investment for the future and then at the last minute mothball it. We are really shocked now as that E-Crane won't be going into service until late 2009." As a division of its parent Indusign NV in Belgium, E-Crane International USA has been "very busy" in 2008 heading for sales at a similar level to 2007 – totalling about \$20 million each year. Osborne says the past two years have been "extraordinary" for the company, particularly for contracts involving

both balanced cranes and supplemental equipment. Most of the sales have been for the bulk movement of coal or limestone at coal-fired power plants. A third contender is the well-known Metso Minerals, which teamed up with the once financially-challenged Sobemai International of Belgium to market its equilibrated cranes... described as more like an E-Crane than a Seram equilibrium crane. That isn't a big surprise as some of the Sobemai team apparently split off in the early 1990s to form E-Crane. The global economic troubles are also being felt at Metso and its equilibrated crane division in Pittsburgh and as Dennis Manley, Senior Project Manager, puts it, "the slowdown is going to affect us all." But, he has a different take on what might be behind project slowdowns. In the United States, coal-fired power plants are being required to improve their sulphur dioxide collection systems requiring new equipment. Some have targeted September 2009 for completion and it makes sense to order any needed balanced cranes now and either put them in storage or hold delivery until then. In the recent past, delivery backlogs had seen delays of up to 24 months from order to

commissioning of the cranes. "A lot of fabricators had been really busy and there was a waiting period before they could fit you in," adds Manley. "Now shops are coming to us asking if they can quote on anything." Metso is excited by the prospects of its balanced crane and has made its first sales in North America to coal-fired power plants in Cincinnati, West Virginia and Maryland. Manley says that's just the start with the focus on North America, but recent quotes have also been made to customers in Chile, Peru and Brazil as the company stretches its interests to eventually market the Sobemai product worldwide. Manley describes it as a "very modern crane with sophisticated PLC controls" and says it is powered by a combined electric/ hydraulic system. And with its 150 offices in 50 countries, Metso has tabs on a huge pool of fabricators waiting for the work. "It isn't a matter of going to the cheapest, but which fabricator makes the most sense; one crane was recently fabricated in Europe and another in the USA." Looking ahead, Manley says the equilibrated Sobemai crane "is going to fit a real nice niche market for Metso with power plants and is equally applicable to scrapyards." The Metso proposal department has been kept "very, very busy" in the past couple of years seeking and filling quotations. "Some of those projects might have slowed down, but companies are still asking us for quotations." As to which firm is the largest, Seram's Julia estimates the French company has placed around 650 units all over the world since it began. Some rivals doubt this equipment sold list involves only equilibrium cranes, but it's a big list just the same. At E-Crane, Osborne says there are now about 100 of his company's balanced cranes throughout Europe and a rapidly rising fleet of almost 50 in North America. And at Metso, Manley says there are about 110 Sobemai balanced cranes in operation around the world, with increasing interest in North and South America.



## Size matters

Size is important, too. Seram's equilibrium cranes are generally smaller than E-Crane units and whereas Seram uses a hydraulic system, E-Crane is decidedly mechanical. Each will argue the pros and cons of the two power systems, but both have clear superiority over conventional cranes. Seram has the edge with a slightly better operating range, but E-Crane's crane sizes can go larger allowing its units to service bigger ships such as post-Panamax vessels handling bulk materials. Seram is trying to bridge the lift-capacity gap and recently sold its largest custom-built balanced crane ever, an 880-tonne giant that is being used for dredging in the Port of Antwerp in Belgium and boasts a 35-tonne lift. E-Crane can go even mightier with its 3,000 series and its 50-tonne bight at a reach of 45 meters. The largest E-Crane ever built – a crawler-mounted high portal gantry with a reach of 45 meters and a lifting capacity of 24.5 tonnes – is in service at Corpus Christi, Texas, and can service vessels up to 80,000 deadweight tonnes and carrying iron ore. Balanced cranes come to the job ready to work hard. They are available in a wide variety of heavy-duty undercarriages such as fixed, freestanding, crawler or trolley, rail and rubber tyre and even barge-mounted. Erection can be as quick as three to four weeks, saving dock and infrastructure costs. The list of bulk materials they can handle includes coal, limestone, grain, potash, aggregate, gypsum, ores, bauxite, and woodchips. They are common in scrap yards and waste material movers. E-Crane and Seram both have customers who have replaced two or three excavators or up to three mobile cranes with one of their balanced cranes. Crane power ranges from 20 tonnes per meter on the smallest units, to over 1,000 tonnes per meter on the larger more powerful units. Typical reach for a Seram equilibrium crane ranges from 15 to 40 meters compared to conventional boom cranes whose reach ranges from 10 to 20 meters. E-Crane units range in reach from 20 to 45 meters and a capacity lift of 6.5 to 45 tonnes. In one recent contract, E-Crane towed a floating bulk handling terminal from the Port of Zeebrugge in Belgium some 4,915 nautical miles (9,102 kilometers) to the Port of Matadi in the Democratic Republic of Congo. The 39-day, tug and barge journey was completed in August 2008. The E-crane is serving as a new floating transfer station at a flourmill unloading and loading ocean going vessels. And in a milestone contract completed in September 2008, E-Crane International USA installed one of its 1500 B series cranes and



added a hopper and barge-handling equipment for the Ohio Valley Electric Corporation at its Kyger Creek plant on Cheshire, Ohio. The project marked the progression of E-Crane from a balanced crane supplier, to a company capable of providing "turnkey" engineering services in the bulk-handling sector. A similar project is now underway for Indiana-Kentucky Electric Corporation's Clifty Creek plant in Madison, Indiana with on-site installation projected to begin in the spring of 2009 and commissioning in 2010. E-Crane, through its Dutch and Belgium operations, is also building two of its larger 3000 series cranes for the Australian iron ore company Altus and has three coal handling projects underway in the Gulf of Mexico area involving 2000 and 3000 series cranes. The advantages of balanced cranes over conventional cranes are rapidly becoming more widely appreciated, according to the major manufacturers such as Seram, E-Crane and Metso (Sobemai). They list the benefits as:

- Huge reductions in operating and maintenance costs
- Increased reliability thanks to reduced stresses and loads
- Lowest cost per tonne unloading system
- Modular design and fast erection times
- Low energy consumption (about 20-30% of conventional crane power use)
- Low maintenance thanks to less wear and tear on components

And since June 2008, Seram and E-Crane offer innovative Internet or telephone system monitoring of equipment to help in troubleshooting and preventive maintenance. Seram uses the GSM telephone network to provide supervision of its balanced cranes and can register all life parameters of the crane, such as checking its hydraulic pressure, oil temperature, greasing schedules, and lifting capacity used – all from its head office in France. E-Crane has also offered similar Internet-based crane monitoring 80 different aspects of crane operation continuously or by specific client invitation. 