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A wry look at engineering

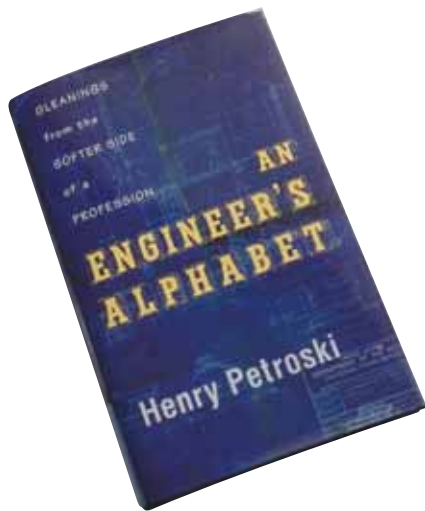
An Engineers Alphabet: Gleanings from the softer side of the profession is a 'dip-in and out' kind of book, written by one of America's best known engineering writers Henry Petroski. It includes a wide range of thoughts, quotations, anecdotes, facts and other gems relating to the practice, history and traditions of all types of engineering from civil engineering to design.

It is organised alphabetically so it can be used as a bit of cross between a dictionary and an encyclopaedia, however many of the entries make a good read regardless of their usefulness. It can even be an ideal bedtime book - especially when travelling - which is how we reviewed it.

This is not a book that will appeal to everyone - engineers of all types definitely but those looking for a good yarn no. If you like engineering or the profession in general then give it a go.

The book is published by Cambridge University Press, ISBN 9781107015067 and is priced

at \$21.99, although it can be purchased at a substantial discount on Amazon.



Manapouri – The toughest tunnel

This DVD has only a few glimpses of cranes and aerial lifts in its 50 minutes view time, but is utterly fascinating all the same.

Using original film footage the film charts the building of the original underground hydroelectric power station and feed tunnel to the remote Doubtful Sound, in New Zealand's Fiord Land during the 1960s and 1970s. It then covers the even more challenging second tunnel which has been completed more recently.

It is totally absorbing and fascinating, exceptionally well produced by TVNZ. If you are at all interested in incredible civil engineering projects then this is worth getting.

Manapouri is published in the UK by Old Pond Publishing and available for £14.95 order online at www.oldpond.com or call +44 (0)1473 238200



Getting better each year

The IPAF Powered Access Rental Market reports are now in their fourth year and clearly getting becoming more useful and, dare we say it, accurate each year. This is the third report IPAF has carried out in partnership with Ducker Worldwide and one can clearly see how the consulting company is building on its previous experience.

As usual there are two reports, one for Europe and one for the USA, the period covered for both is calendar year 2011 and the period of the survey runs from 2008 providing



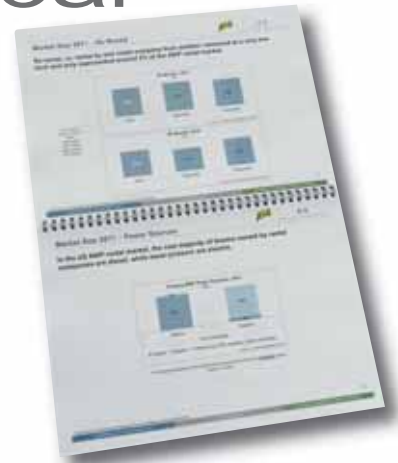
users with the historical information together with a short term forecast through to the end of 2013.

The information is gathered through telephone interviews with rental companies, supported by input from



industry associations and industry experts. The result is a very credible report which looks at a variety of information including rates, utilisation, average age of the fleet and the split between specialist rental companies and generalists. This year the North American report includes a brief look at the Brazilian market which has been developing rapidly in the past two years.

The European report includes 10 countries, the UK, Germany, Finland, Denmark, Sweden, The Netherlands, Spain, Norway, Italy and France and is by necessity a great deal more substantial a report than that of the



USA which does not attempt to provide any regional variations. Both reports include additional information compared to previous years such as a scissor/boom split in North America and fuel sources in Europe.

Summary

Since Ducker took over, these reports have been very useful and largely pretty accurate – or as accurate as these things can be. However this year they seem even better in terms of layout and clarity of information. If you are looking for an overview of the Western markets which still make up more than 85 percent of the world market for aerial lifts then these are the reports to go for, rather than the high priced garbage that so often masquerades as an in depth industry report. In other words we have no hesitation in recommending them.

They are available from IPAF at a price of:

Europe:- €315/£280/\$425 for IPAF members or €572/£507/\$766 for non-members.

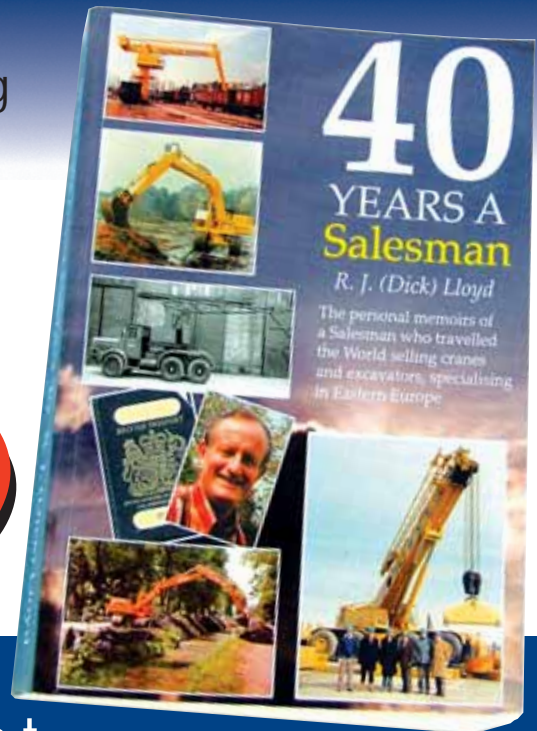
USA :- €262/£233/\$354 for IPAF members or €477/£423/\$638 for non-members.



40 Years a Salesman

Anyone who has been involved in selling cranes or plant will love this book. Stacked full of photographs and printed on high-quality paper.

This is a book not to be missed.



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GOING UP IN THE WORLD

A history of Simon Engineering, the development of the powered access industry and a lifetime as an engineer, by Denis Ashworth

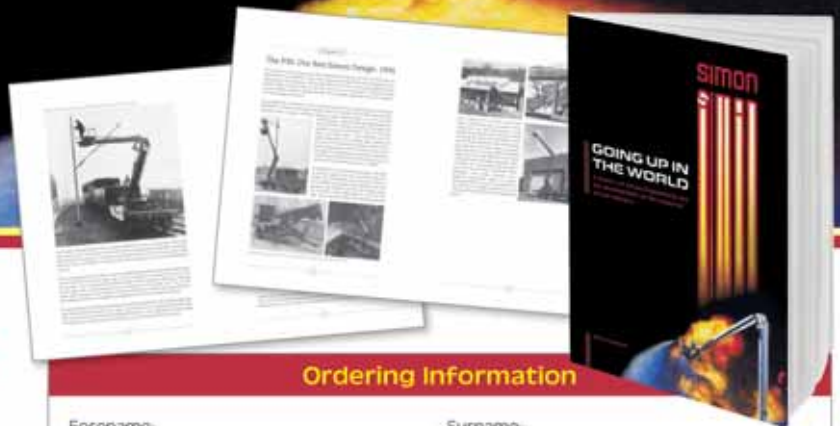
Ashworth was a keen engineer and from an early age found himself in at the very start of the modern powered access industry.

His book is an unusual combination of autobiography and history of Simon Engineering Dudley, a pioneer of the powered access industry and at one time, the world's largest manufacturer of aerial lifts.

The coffee table sized book, is highly readable and includes around 150 photographs and drawings from the very beginning of the industry. It is a 'must read' for anyone who is interested in powered access, the hydraulic equipment industry or in comparing modern day engineering challenges with those of an entirely different era.

The book is available direct from the publishers at £19.50, plus £4.50 postage and packing.

- Continental Europe €23 plus €6.50 postage & packing
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Sarens SGC-120 Ring Crane

The Sarens SGC-120 is a giant ring crane designed for use in petrochemical, nuclear and other heavy lift applications. It can lift 3,200 tonnes at a 30 metre radius and 1,000 tonnes at 80 metres. The real crane has a 130 metre main boom to which a 90 metre 'light duty' jib can be fitted.

Among the interesting statistics for this crane is the weight of the hook block at 105 tonnes and the fact that it takes one hour for the crane to slew through one revolution. The ballast is provided by locally sourced material in 36 shipping containers to total 3,600t of counterweight. The entire crane can be shipped in around 135 standard containers.

Sarens commissioned this massive 1:50 scale model from WSI Models. It is configured with the main boom only, but even so laid out the overall length of the model is 3.3 metres long. With the boom up it reaches a height of 2.6 metres and the diameter of the ring to the edge of the spreaders is nearly 900mm.

The model comes in two very large boxes which together weigh 48kg. A comprehensive set of instructions describes the assembly which is mainly straightforward, but sometimes two people are needed to lift parts, and reeving the massive hook requires significant patience.

One interesting aspect is that the model does not come with loaded ballast. Instead the containers are empty and need to be filled with sand or other material. This is a sensible modelling decision by WSI as it reduces the shipping weight while at the same time reflecting the philosophy of the real crane.

The metal ring with the ground bearing plates is all prefabricated and four large bogies are mounted on the ring track. Each bogie is impressively modelled with the individual drive motors visible.

The superstructure is very big, but simple in design and detail as it reflects the uncomplicated concept of the real crane. The structure looks great with realistic beams and the deck has an anti-slip surface. Six large detailed winches are mounted on the deck together with seven metal containers, and there are hydraulic lines running between them. The handrails are metal and

there are two sets of excellent metal staircases to provide access to the deck.

A small plastic cab is well detailed inside with controls, screen, cabinet and seat and it would have been nice if it had lifting eyes so it could be posed being lifted. Such is the size of the crane that the cab looks lost on the massive upper deck. The 36 ballast containers are made of tough plastic and stack neatly to provide an impressive array.

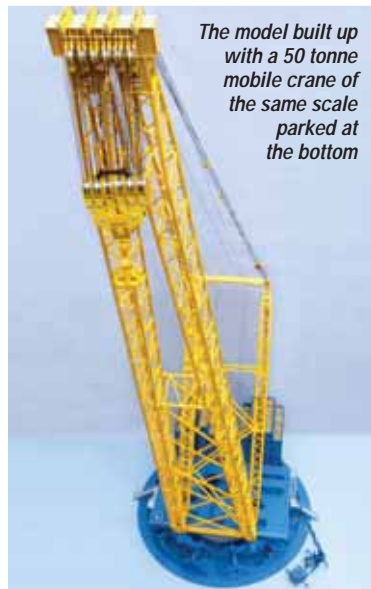
The main A-frame is made of huge parts. The rear ties are about 200mm square and heavy. The main struts are giant lattice sections 100mm x 50mm at the widest with member sizes around 8mm thick. This is massive size model engineering and is very impressive on its own. The boom sections are the same dimensions as the A-frame parts and the whole boom is therefore massive, well made and strong. The main boom guy ropes have metal connectors and look good with accurate manufacture meaning that the tensions in the parts look broadly equal with nothing sagging.

The hook block is very large and heavy, and includes a huge pair of double hooks with working latches. It is very well detailed with excellent graphics and it makes a great model on its own. An amazing feature of the model is that the upper deck sits on the bogies and the whole crane rotates smoothly even though the model is exceptionally heavy. The hook block is controlled by four winches and these work really well with a smooth push-release brake. However it is a challenge to keep the tension in all the threads when trying to raise and lower the hook. Similarly the two luffing winches work, but again it is difficult to maintain the tensions in the luffing ropes.

As a model engineering achievement the Sarens SGC-120 ring crane sets the bar higher. It is a



Starting the erection with a bogie on the ring



The model built up with a 50 tonne mobile crane of the same scale parked at the bottom



One of two huge boxes



Containers filled with local materials act as ballast



The main deck with operator's cabin



Massive hook



The size becomes apparent

giant of a model and will get attention from anyone who sees it. However it is not the most highly detailed model. The real crane is a simple and efficient design and the model captures that perfectly but at close viewing there are fewer graphics or details such as cables and hoses.

Only 500 models have been made and it costs €1,550 from the Sarens Shop so a collector needs a big wallet and space to match. It would also look great in an office or reception area, where it would no doubt create great interest.

To read the full review of this model visit

www.cranesetc.co.uk

Cranes Etc Model Rating

Packaging (max 10)	8
Detail (max 30)	24
Features (max 20)	16
Quality (max 25)	23
Price (max 15)	12
Overall (max 100)	83%



Heavy lattice boom construction.