



# WOOD SCIENCE NEWSLETTER

Institute of Wood Science

September 1994

## FROM THE PRESIDENT

Two years is virtually up for me, but before my name is consigned to the archives, please allow me a few moments of nostalgia and reflections.

The happiest times have been the branch visits. This, I decided, would be my theme for the two years stint, and perhaps not before time. A few of our branches had been having a rather hard time of it. After some rather tedious discussion, we have managed to keep them all alive and kicking. These regional committees deserve far more support from the membership than they are getting. The meetings they arrange are there for your benefit. Only you the membership can keep the branches alive. It's one thing being a member, it's another being an active member.

By the time you are reading this I will have fulfilled my promise of visiting the branches, with a final fling with our Irish colleagues when I meet them to do a presentation in Dublin in September.

To all our branch Chairman and their committees, and in advance of the Dublin visit, I thank them all for their welcome and friendship which has ensued. The nice thing about our Institute, is the happy harmony and balance of an academic and commercially based membership. For all I know this may well be almost unique to our Institute, and goes so well. We have much to learn from each other, so let's make the most of it.

Without doubt the highlight for me has been our two most recent Conferences at York and Chester. You have heard it all before from me by now, but once again I must stress that the Conference is the flagship of our annual activities and does much to enhance our Institute. If the Editor will be gracious enough to allow me for one last time, I must surely recognise and thank the Conference Committee chaired by Geoff Bagnall, for such enthusiastic support in assembling these two splendid Conferences.

Opportunities to promote our Institute I have not flinched from. I thank organisations such as B.W.P.D.A. the T.T.F. and the North West Timber Trade Association for their courteous invitations to their annual events.

And now the final credits:

I am very mindful of our Corporate members, the sponsors of our Conferences, and as of late some regional meetings. The Chairmen and their committees, the Council of Management, Education, Membership, and F&GP committees do not go without a mention, along with the two stalwarts in the I.W.Sc. command headquarters, Maurice and Freda.

Two years is up, they have caught up with me at last. It is an honour to be the President of the I.W.Sc., one to be savoured and remembered for the rest of ones life., and when we become President we all do it in our own particular and individual way. I only hope mine has been good enough for you. *"I gave it my best shot!"*

Best wishes to you all for a secure and happy future in our trade and our Institute.

Keith Purcell AIWSc  
President.

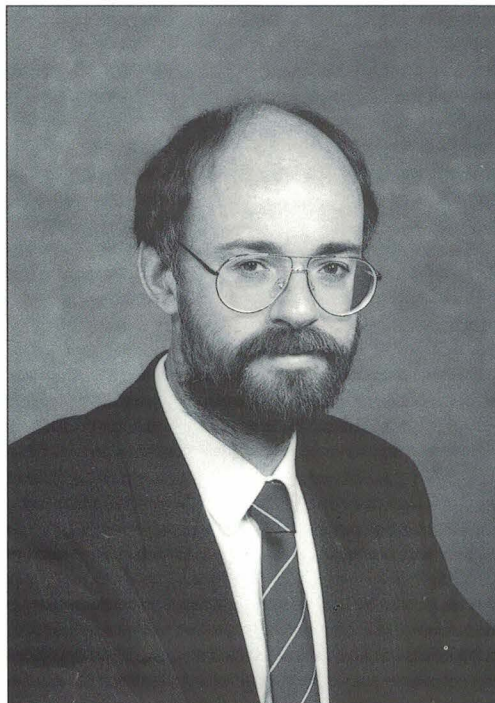
## PROFILE OF THE PRESIDENT ELECT

At the Annual General Meeting in September Keith Purcell will hand over the responsibilities of President to Dr. Martin Ansell, Senior Lecturer in Materials Science at the University of Bath.

Martin's involvement with the Institute of Wood Science results from his research activities which are currently associated with the fatigue and creep performance of laminated wood and particleboard products such as chipboard, OSB and MDF. He is funded by the Department of Trade and Industry, the EEC, the Building Research Establishment and the Engineering and Physical Sciences Research Council.

Martin was Chairman of the western Countries Branch of the Institute for two years until this summer and he is now Vice Chairman. The Branch has recently arranged more outside visits to companies, timber trade organisations and to arboretums, museums and historic ships. The introduction of collaborative meetings with the Joinery Managers' Association and the Institute of Materials has also been successful.

Delegates at recent conferences will have met his partner Frances and he is the proud father of two delightful daughters, Victoria (14) and Jenna (12). Martin's recreational pursuits include cycling, preferably in remote parts of Continental Europe, and tending his newly acquired garden in Bath.



President Elect, Dr. Martin Ansell

During his time as President his major aim is to introduce a Continuing Professional Development scheme to encourage the Membership to actively improve their knowledge of wood by attending meetings, seminars and conferences. This is likely to involve the introduction of a new grade of professional membership and consultation with the Membership via the Newsletter will be encouraged.

He considers timber and wood products to be engineering materials of distinction on a par with metal alloys, concrete, polymers and composite materials. In order to extol the virtues of wood he intends to establish joint meetings with other professional institutions such as the Royal Institute of British Architects and the Institute of Materials. He is a keen supporter of the Structural Timber Education Programme (STEP) initiative.

In conclusion Martin would like to acknowledge Keith Purcell's energetic and successful approach to the Presidency which has raised the profile of the Annual Conferences at York and Chester to new heights. He intends to work closely with the Committee Chairmen, Editor of the Journal, Members of Council and the Director to promote the welfare and professional impact of the Institute of Wood Science.

Maurice Holloway AIWSc, Editor



# CONFERENCE

Once again the Institute of Wood Science has been responsible for organizing a leading event in the wood industry calendar. The strategy of industry involvement and sponsorship proved successful for a second time, and this year we had the pleasure of working in partnership with Kronospan Limited and the Timber Trades Journal.

Following the theme set in York last year, the delegates were welcomed to the conference at the President's Reception by Keith Purcell aboard the "Lady Diana" showboat. Delegates were treated to a most enjoyable cruise in fine weather down the river Dee through the picturesque Grosvenor estate to "Ironbridge", accompanied by an enthusiastic Jazz band and aided by a welcoming Bucks Fizz. TTJ sponsored the Presidents Reception which allowed everyone to cast off the shackles of working in the timber industry during a recession.

Suitably relaxed, and with a distinctly sociable atmosphere already established, the delegates were whisked back the short distance to the sumptuous Grosvenor Hotel by coach where all involved were able to carry on the many interesting and friendly discussions begun aboard the "Lady Diana" during an excellent but informal evening meal.

Following a very pleasant breakfast, the morning session of the conference began with two contrasting papers on the same theme: timber in construction. Peter McCurdy (McCurdy & Co. Limited) gave an excellent insight into the reconstruction of the Globe Theatre, which contrasted with the next presentation by Donald Sharp (TRUS JOIST MacMILLAN) which highlighted the enormous potential of modern composite structural wood products.

Suitably refreshed by coffee, the morning session ended with two fascinating papers, the first by Dr. Geoffrey Elliott (Forests Forever) who presented the Leslie Boustead Memorial Lecture, giving a powerful presentation on the complexities and challenges facing the world wide forest resource in the future. Mike Connell (Hickson Timber Products Limited) elegantly illustrated the complexity of developing a new timber preservative, from research to market place.

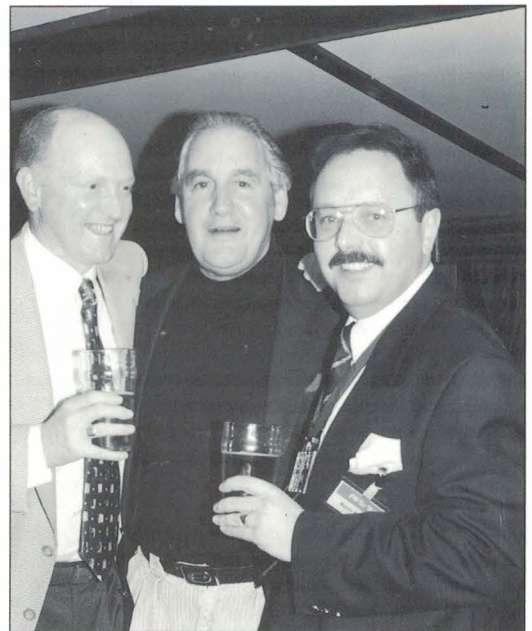
Once again, delegates were plied with yet more food and refreshments of a very high standard over lunch, and with all delegates suitably fortified and refreshed, the afternoon session of the conference began. Our main sponsors for the conference, Kronospan Limited, presented an excellent insight into the production of MDF presented by Robert Elias.

The final session of the conference was a series of three mini-papers on marketing-related issues designed to highlight the importance of the media and public relations to the timber industry. Louise Keattch (Benn Publications) opened up the mystical world of publishing in a very enlightening way, while Stephen Key (Edson Evers Public Relations) highlighted the advantages of positive Public Relations (never more relevant in our industry). The third of the Mini-Marketing papers was presented by Peter Travis (Travis Dale & Partners) the man behind the award winning "Think Wood" campaign, who more than ably demonstrated the effectiveness and affordability of advertising. The conference was rounded off with an interesting and involved forum discussion session on the whole conference.

It can safely be said that there was certainly something for everyone in the excellent papers presented at the conference, and that there was ample opportunity for all delegates to learn something new. The balance of technical and trade subjects allowed a healthy insight into areas we would not otherwise have experienced, and an interchange of ideas, opinions and experience not possible at any other timber-related event.

The excellent Gala evening dinner was held in the most elegant of candle-lit surroundings, with the quiet start giving nothing away as to the debate that was to shortly ensue. A debate was kindled as a result of the two speeches by our after dinner speakers, Dr. David Wood from our sponsors Kronospan Limited, and Mr. Jean-Paul Jeanrenaud of WWF.

Without rekindling the debate as to who said what (everyone there will no doubt have their own version!), it is safe to say that a lively and impassioned debate ensued as a result, continuing into the small hours of the morning. As an Institute, we can rightly feel proud that we avoided resorting to censorship and exclusion.



Three men on a boat -  
Geoff Bagnall (Chairman of Conference Committee) with  
the Director and President



Audrey Dixon (TTJ) presenting Dr Chris Coggins with the  
"Lucky Number" prize aboard the "Lady Diana"

A pleasant Sunday morning enjoying a tour of Chester's delightful architecture, and a chance to see a lively and authentic demonstration of Morris Dancing provided a relaxing and pleasant way to end what had been a lively, interesting, sociable and informative conference. Delegates left with old friendships renewed, new friendships made, and a feeling that they had a very worthwhile weekend's break from the treadmill of timber industry survival. The number of delegates continued to hold up on the massively improved conference achieved at York last year, and with our President-elect Dr. Martin Ansell already having made such a forward thinking and professional start to next year's conference in Bristol, all I can say to those who missed out on York or Chester, is: "Book Early" (or you could miss out on another excellent weekend!). The last word should perhaps come from our main sponsor for IWSc '94:

"A very enjoyable introduction to the activities of the  
Institute of Wood Science.  
I shall definitely be at Bristol '95"

Dr. David C. Wood - Kronospan.



# EDUCATION

## FURTHER DEVELOPMENTS

The outstanding development of the year has been the introduction of the new Associateship course. Like the Certificate course, this is modular, with a specially written compulsory core unit, in part science, Wood as a Material, and in part technology, Handling and Processing Wood, which seeks to explain why wood behaves in the ways it does. Two optional modules are taken and though the choice at present is limited it is hoped to add to these as demand for topics becomes apparent; alternatively, accreditation of prior learning of an appropriate subject - technical or commercial - to an approved standard is acceptable for this optional component. Finally, a practical project, undertaken ideally in the work-place and relevant to the candidate and his or her company's interest, completes the course. Satisfactory performance in the course and the award of an Associateship of the Institute depends on completion of the work study, submission of an acceptable project and appropriate performance in a 3-hour examination.

As with the work programme for the Certificate, course provision and duration are flexible, with examinations available twice in the year, in June and December. Industrial support for the course comes in the form of prizes to outstanding students and the Institute gratefully acknowledges the support of **James Latham plc with an award of £250 and United Sawmills Ltd. with a travelling scholarship** for exceptional performance in the Associate course and to the **Timber Trades Journal for an award of £150** for the outstanding student in the Certificate course. These awards are made annually at the AGM of the Institute and all students taking the examinations in the previous 12 months are eligible.

Change, too, has occurred with the course structure and examination requirements for practitioners in remedial treatments. A new examination leading to the qualification Certificated Surveyor in Remedial Treatment (CSRT) has been introduced, comprising three components, Timber infestation, Damp proofing and Health and Safety and Law. The Institute is the examining body on behalf of the BWPDA for these subjects and the award of a qualification which local authorities and building societies are requiring of practitioners operating on their behalf.

Dr. J.D. Brazier FIWSc (Hon) Chairman Education Committee

## TRADA REPORTS

### Eurocode Radically Changes Timber Structural Design.

Eurocode 5, the EC standard for the design of timber structures, is now published as an ENV or pre-standard, to run alongside the British Standard, BS 5268, for a trial period. It involves a far more radical change than for other structural materials because, for the first time in the UK, limit state design will be applied to timber structures.

It is vitally important that the ENV is used for two reasons. Firstly, it will identify any problems. Otherwise the UK may find itself lumbered with a definitive code which is much more difficult to change once national standards are withdrawn. Secondly, by working with the new code now UK industry will be in a stronger competitive position long term.

Eurocode 5 will be launched at a seminar in November organised by the Institution of Structural Engineers and TRADA Technology Ltd. with support from DOE and the BSI. It will give an overview of the code, highlighting the differences from BS 5268 and emphasising the strengths and weaknesses for the UK. Speakers include UK representatives on the drafting committee and industry spokesmen influential in implementation. Copies of EC5 together with technical data sheets, design examples and specification aids published by the **Timber Research & Development Association** will be available to delegates at special rates.

## INTERNATIONAL CONFERENCE ON THE DEVELOPMENT OF WOOD SCIENCE/TECHNOLOGY AND FORESTRY. BUCKS COLLEGE 6-8th JULY

The above event was hosted by the Department of Timber and Construction, Buckinghamshire College, Brunel University, High Wycombe, in partnership with the University of Forestry and Wood Science, Sopron, Hungary. It was the first international conference to be held in the UK which has addressed the three areas of wood science, technology and forestry. The conference was truly international and attracted some 80 forest products industry experts and researchers from over 20 countries, and nearly 60 papers were presented. The contents of some of the papers are indicated below.

In the session on sawmilling/cutting tools notable contributions were from Australian workers. William McKenzie reviewed the worldwide research and developments relating to the reduction in saw-kerf width and highlighted the benefits. Gary Waugh from the CSIRO gave a detailed account of the way in which lighter and faster sawing systems are being used to successfully convert the highly stressed fast growth eucalypt logs now being harvested in Australia. UK researchers Geoffrey Livingstone and Gordon Hall, of Buckinghamshire College, examined the effects of corrosion on saw blade steels and concluded that the interaction between different timber species and steel compositions are very significant and can be commercially important.

Kiln drying plants will generally be the biggest users of energy in many forest industries and in the session on drying Stavros Avramidis presented the results of studies carried out in Canada on the drying of hemlock and Douglas fir in a radio frequency/vacuum drier. The rf/v process was found to be economical and fast particularly when drying lumber over 80mm thick. Green hemlock and Douglas fir were dried in 24-40 hours and the dried lumber quality was 'exceptional.' In another study Margit Tamasy-Bano of Sopron University, Hungary, carried out an in-depth theoretical analysis of the heat pump process for wood drying and highlighted the advantages especially in respect of energy savings. Wood is a major source of energy in many developing countries accounting for more than 90% of the total national energy consumption. The problems created by this situation in Tanzania were highlighted by Romanus Ishengoma of Sokoine University who also proposed various solutions to the wood fuel problems.

In the session on wood science and utilisation, Roger Cooper of Bangor University, discussed the changing nature of wood supplies and how this will influence the forest industries. The increasing use of fast grown plantation timbers will have implications for these forest industries in view of the changing characteristics and properties of the wood raw material. The importance of various environmental influences was also discussed.

In relation to wood utilisation Victor Burclaff, of the University of Oxford, presented a refined PROSPECT database. The database holds information on 91 wood properties and 172 end-uses for some 1050 species. It allows species to be evaluated for a given end-use or an end-use can be evaluated for a given species. The author argued for the increased use of lesser known species (LKS) and stressed the significance of the relationship between species properties and their possible end-uses.

The protection of freshly cut timber from fungal infection is a matter of much concern in British Columbia. Alan Potter, of MacMillan Bloedel, described how the company has been active in seeking treatments which satisfy the increasingly stringent criteria of worker safety, low environmental impact and cost effective protection of export timber. Results of trials on alternatives to chlorophenates were discussed and possible future formulations were indicated.

In the field of biodegradation Buckinghamshire College researchers Gervais Sawyer, Andrew Pitman and Simon Cragg presented results of their research into the biology and environmental requirements of different species of wood boring weevils and recommended appropriate control measures. Wood boring weevils are widely distributed in the UK and those of the family *Curculionidae* are estimated to be responsible for some 10% of property infestations.

Buckinghamshire College, continues to offer BSc (Hons) and MSc programmes in Forest Products Technology together with special 'tailor-made' Diploma programmes of 6-10 months duration for overseas students. Application forms and further information are available from the Department; telephone (01494) 522141.

Abel Comben FIWSc



# BRANCH LINES

## LIVERPOOL & DISTRICT BRANCH

The **Liverpool Branch** continues to do well, with another busy season of meetings and activities concluded in April.

The theme throughout has been wood and more wood, but what a diverse range of study methods we used.

The Branch's visit to the Nature Reserve at Formby was hosted by Committee man Bob Blackwell and his wife Joyce. Bob has recently retired (for the second or third time, I'm told) after many years in the Trade with Hicksons, but he and Joyce have remained as active as ever in the Branch and are much valued by our members. Anyway, the Red Squirrels came out in force to greet the Institute (they rely on trees too!) and a most enjoyable time was had by all. Superb refreshments were provided by the Blackwells at their nearby home. Squirrels ate nuts elsewhere.

At our next meeting we were whisked off to Brazil, by President and Importer Keith Purcell, and his good friend Brian Swift of UCM Ltd. The duo presented a lively and entertaining view, in words and pictures, of their recent adventures in South America, with the emphasis on Parana Pine production. The meeting was generously sponsored by UCM and this enabled a rather nice hotpot supper to be laid on.

November saw the traditional joint meeting with TRADA at Haydock Park when the theme was "Communicating your Message". Attendance was, as usual, very good and some lively debate was inspired by the presentations from Peter Travis and Sue Farrow.

In the New Year, Chris Willams, of World Woods Ltd., visited, to inform, illuminate and entertain on the subject of Timber Supplies in South-East Asia. Chris is an old friend of the Branch and was warmly welcomed, not least because of his superb presentation. Armed with slides, videos, maps, brochures and technical literature, he kept his audience spellbound for more than two hours, with many questions to follow. For a time, it seemed that the bar might close before the meeting did, but Chris was alive to the danger, and discussions continued over a pint. Once again we were fortunate to obtain sponsorship for this meeting, for which we thank Ault Bros. Ltd.

February saw us back at Haydock for our 37th Annual Dinner, with guest speakers Charles Craig and Keith Purcell. As usual, the event was well attended and was judged a success by all present.

The month of St. David and daffodils was an appropriate time to visit Wales for a presentation from Coed Cymru (Welsh Woodlands). David Jenkins gave a fascinating illustrated talk on the Production of High Value Products from Forest Thinnings. The meeting was arranged in conjunction with Bangor University, who also helped to finance the refreshments, along with Hickson Timber Products Ltd.

The Branch AGM in April gave me a pleasant surprise as incoming Chairman. We had the largest turnout seen for many years, and several new faces volunteering for service. Special mention must go to a new arrival to the Branch, Gerrard Magill, who has bravely taken on the post of Vice Chairman. We already have a full schedule of meetings arranged for this season and we look forward to another successful year.

Paul G. Davies, AIWSc  
Branch Chairman.

## HIGH WYCOMBE

On Saturday 14th May seventeen members of the **High Wycombe Branch** visited the Oxford Botanic Garden.

Our visit was under the guidance of Louise Allen, the Botanic Garden's education officer. Her informed and lively commentary will have added considerably to the repertoire of knowledge of all present on both trees and other plants.

The Botanic Garden, which is the oldest in Great Britain, was established in 1621. Still growing, and looking very healthy, is a Yew tree planted in 1650 by the Garden's first superintendent. Amongst the other fine trees is a large *Metasequoia glyptostroboides*, planted as recently as 1949. This species, thought to be extinct but now safe, is but one of the wide range of conservation and research activities carried out at the establishment. Interestingly the Garden claims to be the birth place of the London Plane tree.

One of the areas that seems to attract an unusual amount of interest for many in the group was the display of historic medicinal plants several of which are potentially poisonous! In a way this display represents a link with the original purpose of the Garden which was to support the study of medicine. Equally fascinating was the unique hot house display of tropical aquatic and marginal plants. This is known to be one of the finest of its kind in the Country.

David Woodbridge FIWSc Vice Chairman and Treasurer High Wycombe Branch.

## THE REBIRTH OF A BRANCH

The only meeting Leeds & Sheffield Branch held last this year was its AGM, and at that meeting it decided to seek permission from the Council of Management to change its name to **Yorkshire Branch**, which was subsequently approved by Council.

The changed title to **Yorkshire Branch** will better reflect its membership profile, and meetings will be arranged around the county making it easier for all branch members to attend - suggested locations include Leeds, Sheffield and Hull.

As a result of circulating the branch membership, several letters of support were received, including commitments to try and attend at least one branch meeting per year. In addition, a letter of support was received from Hickson Timber Products Limited who have helped the branch so much in the past. They have invited the new Yorkshire Branch to host a meeting in Castleford at their premises, and to support the meeting with a buffet and attendance from members of their staff.

If anyone is interested in becoming involved in the management of the branch (not an onerous task if a few people split the work), either Andrew Newton or David Carney would be very pleased to hear from you as soon as possible.

Contact details: Andrew Newton (Chairman) Tel: (0482) 853121  
David Carney (Secretary) Tel: (0226) 249590

## AN INVITATION FROM THE INSTITUTE OF BUILDERS MERCHANTS - EAST ANGLIA BRANCH.

The Institute of Builders Merchants has for some time been interested in forging closer links with the IWSc and to that end has arranged for an "invitation meeting" to be held at the Farmers Club, Pump Lane, Bury St. Edmunds on 20 September. Guest speaker will be Mr. E. Barritt, the Planning Officer for St. Edmundsbury, on the Planning Strategy for the Eastern Counties, when IWSc members will be warmly welcomed.

Advise Graham Skillen on Sudbury (0787) 881777 if you are able to attend.



*Louise Allen addressing some members of the group during the visit*



# KRONOSPAN

## WELSH MDF

Many will know that the sponsors of the successful annual conference at Chester, Kronospan Ltd., recently installed a medium density fibreboard (MDF) production line at Chirk. This production line is unique in the UK because it uses the latest in continuous pressing and technology: a 28 m ContiRoll press made by Siempelkamp.

The continuous press produces board in a continuous ribbon which can be cut to any desired length. The continuous press method is the logical development of modern composites manufacture.

Continuous pressing has many advantages over batch pressing with either single or multi-daylight presses. For example, continuous presses produce less waste in that only the sides of the pressed board need be trimmed and the excellent thickness control reduces sanding losses. The continuous process is specially suited to the manufacture of a wide range of thicknesses and improves production capacity for thin boards.

The density variation through the thickness of an MDF board is an important property of this product. A good quality product intended for subsequent machining should have high density ( $>1000 \text{ kg/m}^3$ ) surface layers and a uniform density through the core. The density profile is caused by the viscoelastic properties of the wood fibres and it can be controlled by adjusting fibre temperature, fibre moisture content and applied pressure. Kronospan's continuous press has 28 independent pressure and 4 independent temperature zones down its length allowing great scope for profile optimisation, far more than is possible in batch pressing.

## Production

Round wood logs, mainly Sitka spruce, are debarked and chipped. The chips are sieved to remove the oversized and fine chips prior to washing. The washed chips are conveyed to a presteaming bin and heated up to  $100^\circ\text{C}$ . Then the chips are fed into a digester via a plug screw. This squeezes the chips together forming a tight plug, removing excess water and sealing the pressurised digester.

In the digester the temperature is  $175\text{--}180^\circ\text{C}$  corresponding to a pressure of around 8.5 bar. These energy efficient conditions aid the separation of the fibres. The refiner, manufactured by Sprout-Bauer, consists of two 54" discs one spinning and one stationary. The wood chips are fed into the gap between the two discs via a hole in the middle of the stationary disc. The surfaces of the discs have a series of raised bars. At the centre of the disc the breaker bar pattern is coarse and at the periphery of the disc the bars are much finer. Consequently, as the wood is driven across the radius of the disc by centrifugal forces, it is gradually broken down into the constituent fibres.

The fibres are discharged from the refiner down a pressurised blow line, and adhesive, usually UF resin, is injected. The wet resinated fibres are blown through a 120 m flash tube dryer to two cyclones which separate the dried fibre from the steam. The fibre moisture content is reduced to 10-11%.

The dry fibre is pneumatically conveyed to the mat formers via a system of classifiers and filters; any fibre clumps are removed. Two mat formers, in series, distribute a layer of fibres onto a moving continuous belt which transports the mat through the various stages of mat formation for the ContiRoll press.

Immediately after each former, the mat is weighed and the result is used to control an equalising scalper that removes excess fibre. The scalper adjusts its height according to the bulk density of the fibre, thus ensuring a consistent mass during production. A typical mat for an 18 mm thick board is 680 mm high and has a bulk density of  $23 \text{ kg/m}^3$ .

The mat passes to a continuous prepress and is squashed to reduce air content and increase density. This reduces the time required for hot pressing and allows a smaller opening into the ContiRoll press. After prepressing, a typical mat height for a 18 mm board is 200 mm. The mat is then side trimmed and screened for metal.

The ContiRoll press applies a combination of heat and pressure to consolidate the mat and converts it to MDF. The fibre mat is carried through the press between two thin stainless steel belts. Heat and pressure are transferred from the press platens to the steel belts via rolling rods.

Press pressure is maintained along the length and across the width by 28 frames, each with 5 equally spaced hydraulic cylinders and all are controlled by a microprocessor.

There are four temperature zones down the length of the press and each is again micro-processor controlled. The pressing stage consists of 4 distinct steps: initial compression, plastification, followed by calibration and final release from the press.

Rapid heating of the surface occurs in the initial compression phase. The steam generated at the surfaces migrates and warms the centre of the mat. Under pressures of 3-3.5 MPa and temperatures of  $200\text{--}300^\circ\text{C}$  the mat thickness is reduced to about an eighth of its prepressed thickness.

At the plastification phase a constant pressure causes a gradual reduction in thickness with rapid heat transfer to the centre of the board.

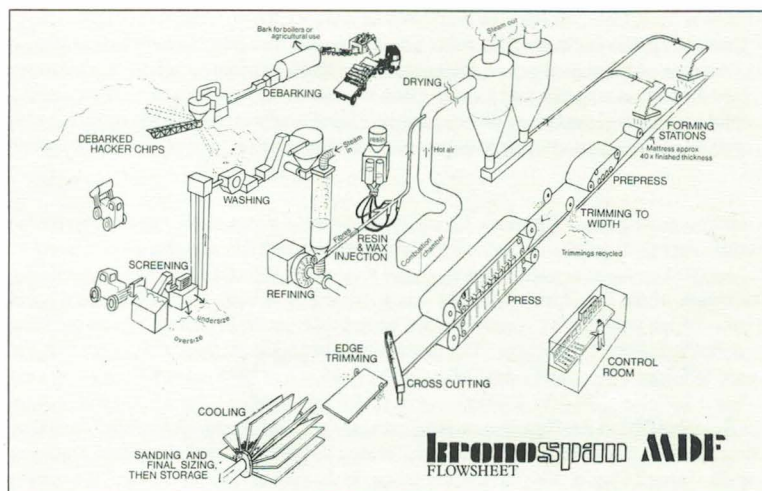
At the calibration stage, the pressure is increased or decreased to achieve the required product thickness. By this time the temperature in the bulk of the board has reached  $100^\circ\text{C}$  or more, rapidly curing the resin. After curing no further compression should take place as it may break the newly formed resin bonds.

Toward the outfeed of the press, the pressure and temperatures are gradually lowered to allow a controlled release of residual steam pressure.

Each product thickness and type has its own individual pressing programme. The process control computer loads the programmes in to memory when a size change is made, so adjustment of all the relevant parameters is automatic.

The actual production capacity has exceeded the design capacity of  $140,000 \text{ m}^3/\text{annum}$ . In all Kronospan is very happy with the new MDF line's : efficiency, capacity, quality and reliability.

Rod Elias and Dr. Mark Irlé. AIWSc.





# SIDE LINES

Peter Collings gained a BSc Hons Degree in Forest Products Technology at the Buckinghamshire College and was awarded the IWSc first prize for his third year dissertation.

I am sure you will appreciate that since starting my employment with Hutton + Rostron Environmental Investigations Plc. Gomshall, Surrey, I have been rather busy 'learning the ropes' and the new skills and techniques required for my new duties as a specialist consultant in the biodeterioration of building materials.

Since November, I have travelled the length and breadth of the country visiting many types of buildings from Scottish Castles to Victorian London apartments where timber decay has become apparent. My duties involve offering a specialist consultancy to property owners and other clients who are concerned with the performance and operation of their buildings. This is generally concerned with the investigation of building failures and the care and conservation of historic properties. In this role, I have been very much involved with some notable historic buildings such as Windsor Castle and Marleborough House in London and Taymouth Castle in Perthshire, Scotland, a castle which, incidentally, was recently the venue for the "Green" Treatment of Timber Conference, organised by the Scottish Ecological Design Association.

Other services offered by the company include the provision of a consultancy and service in building performance and design, planned maintenance of historic buildings, building materials and environmental management.

The company uses techniques for detecting rot and beetle attack which are minimally intrusive and involve the use of 'sniffer dogs' for which the company is now well known and I will shortly have to learn the skills of dog handling!

During my course of studies at the Buckinghamshire College in High Wycombe, I was fortunate enough to work for James Latham Plc during my summer vacation periods under their Latham Link Sponsorship Scheme. This is a scheme which encourages a closer cooperation between industry and the college and gave me valuable work experience in the day to day operations of a major timber importer. This company also supported me in my final year project in which I studied, with the close cooperation of the staff, the development of BS 7750 Environmental Management Systems within the company.

I will always be grateful to the Buckinghamshire College, my tutors and to James Latham Plc for their help and encouragement in starting me off on my consultancy role.

P Collings BSC (Hons) AIWSc

## DID YOU KNOW?

### WALNUT

Anyone who has picked ripe walnuts without gloves knows that the walnut tree is permeated with a black stain. When the soldiers of British India were fighting on the Afghan border and it became necessary to infiltrate spies into Afghanistan these intrepid English officers, notably the great John Nicholson, used walnut stain to dye their skins black.

Contributed by David Woodbridge  
Sourced from  
'Imported Timbers in New Zealand' by Stuart C Scott published in Wellington 1987.

*Rothounds can detect outbreaks of dry rot (Serpula lacrymans) before they are found by conventional means and before the structural integrity of the timber has been compromised. Original timbers can thus be retained with a resulting saving of costs.*



## DATES FOR YOUR DIARY

1994		
15-18 Sept.	Self Build Frames Show	Alexandra Palace, London
27 Sept.	IWSc AGM and Council Mtg	TTF, London
29 Sept. - 2 Oct.	Home Improvements, DIY and Leisure Exhibition,	Olympia, London
2-4 Oct.	Careers Education and Training Exhibition	Earls Court, London
26-27 Oct.	CSRT Examination	BRE, Garston, Watford
2 Nov.	IWSc Education & Membership Committee meetings	Hughenden Valley, HW
16 Nov.	Design of Timber Structures Eurocode 5	Institute of Structural Engineers London
24-27 Nov.	Good Woodworking Show	Alexandra Palace, London
2 Dec.	IWSc Examinations	
2-6 Dec.	Building Trade Show	Wembley Centre, London
8 Dec.	IWSc Council Meeting & Branch Chairmen's Mtg	TTF, London
1995		
22-24 Jan.	DIY and Home Improvements Trade Show	Olympia, London
6-7 Feb.	The Challenge Safety & Environment (IRG International Wood Symposium)	Cannes Mandelieu France
7-9 Feb.	Safety & Health at Work Exhibition	Olympia, London
8-9 Feb.	Softworld in Construction Building	Ramada, Heathrow
21-23 Feb.	Construction Industry Computer Exhibition	Barbican Exhibition Centre
23-26 Feb.	International Practical Woodworking Exhibition	Wembley Centre, London

The IWSc has become the administrators as well as the examining body on behalf of the BWPDA for the new CSRT Examination (Certificated Surveyors in Remedial Treatment) which now supersedes both the old CRDS and CTIS qualification.

The examination consists of three modules:

- (a) Timber (plus a viva voce and an identification)
- (b) Damp (plus a viva voce)
- (c) Health and Safety/Law

The written examination for each module is of a two hour duration and can be taken separately or all three modules can be taken over two consecutive days at a choice of venue, either BRE Garston, Oldham or Stirling (Scotland).

Where a surveyor has already qualified in one examination (i.e., CRDS or CTIS) he must sit the examination he has not qualified in, plus the Health and Safety/Law examination.

A certificate allowing the use of the letters CSRT will only be issued when the surveyor had passed **all three modules**.