



AUSTRALIAN CERTIFICATION AUTHORITY FOR REINFORCING STEELS LIMITED

Chairman: Graham Hutchinson

Deputy Chairman: John Fenwick

Executive Director: Mark Turner

NEWSLETTER - NOVEMBER 2004

WELCOME

We have just concluded a very successful year in which we offered and implemented the ACRS Certification programme. This has followed a long development period.

The acceptance and commitment to Third Party Product Certification by the manufacturers and processors to the Australian market is remarkable. I cannot state exactly what proportion of steel reinforcement supplied and processed in Australia comes from certified processors, but we estimate over 90% of bar and mesh is subject to ACRS assessment.

We are also noticing interest in ACRS by end-users and specifiers. In particular, a number of State Government Construction Authorities now require third party product certification.

Our priorities for the next 12 months are fourfold:

- a Extend membership of ACRS Council to a broader group of end-users and specifiers.
- b Raise awareness of ACRS and increase its reference in contract specifications.
- c Extend certification to more steel manufacturers and mesh processors.
- d Introduce voluntary certification of prestressing strand suppliers, following publication of a new Australian Standard.

As I have worked closely with our current Executive Director, I look forward to continuing the relationship with our new appointee. I commend the ACRS third party certification scheme to you. Our first twelve months of product certification has helped establish quality benchmarks in steel reinforcement and mesh manufacture.

Graham Hutchinson
Professor of Civil Engineering
University of Melbourne
Chairman of ACRS

ACRS APPOINTS NEW EXECUTIVE DIRECTOR

ACRS has announced the appointment of Philip Sanders as its new Executive Director. He replaces Mark Turner, who will return to full-time duties with the Steel Reinforcement Institute of Australia.

Philip has worked for the SRIA and, more recently, with a steel reinforcement manufacturer and processor; involved in major contracts where quality and performance are essential. Philip's involvement with universities, consulting engineers and major contractors will assist him in getting the message of ACRS into the market place. Philip has a Bachelor of Science Civil Engineering from South Bank London and an MBA from the AGSM, majoring in strategic planning. Philip commences with ACRS at the beginning of January 2005.

THE ACRS NATIONAL COUNCIL

The Council of ACRS is independent and representative of a broad range of construction industry participants, and includes private and public sector specifiers, users and suppliers.

Current members, with their representatives, so far are:

Association of Consulting Engineers Australia (ACEA)

- Bill Ryan

Australian Constructors Association (ACA)

- Peter Stewart

Austrroads

- John Fenwick

Bureau of Steel Manufacturers of Australia (BOSMA)

- David Armston

Concrete Institute of Australia

- David Meager

Housing Industry Association (HIA)

- Mike Harding

Master Builders Association (MBA)

- Neil Evans

National Precast Concrete Association of Australia (NPCAA)

- Brian Mallon

Steel Reinforcement Institute of Australia

- SRIA Independent Processors - Ron Pitman

- SRIA Mill-Owned Processors - Harry Harisiou

The University of Melbourne

- Graham Hutchinson

Australasian Wire Industry Association (AWIA)

- Barry Loudon

The Council of ACRS is keen to expand its representation to include other specifiers and is continuing to contact these organisations.

FOUR STEEL MILLS CERTIFIED

Certification of reinforcing steel manufacturers is a key part of any effective scheme for the steel reinforcement industry.

Four (4) major manufacturers, who supply the Australian market, have been successful in achieving ACRS Certification. These four mills are:

NatSteel, Singapore

OneSteel Market Mills, Rooty Hill, NSW

Pacific Steel, Auckland, New Zealand

Smorgon Steel, Laverton, VIC

ACRS assessors visited each of these mills. Their procedures include review of each manufacturer's quality management system, with a particular focus on product quality. The assessors also arrange an extensive sampling and testing programme. They organise two sets of samples of varying diameters of bars. In many cases their sampling involved visiting "downstream" customers of these mills to obtain the required product. The first set of samples were tested at the mills' laboratory; the second set tested by an independent NATA registered test house. These two sets of test results were compared with each other and with the batch release tests for each heat sampled.

ACRS assessors were then able to form an opinion on the quality and competence of the mills to produce steel reinforcement to AS/NZS 4671 on a consistent basis.

MAJOR STEEL PROCESSING SITES CERTIFIED

As at 26 May 2004, ACRS has certified thirteen (13) major steel processing sites around Australia.

For bar processing ACRS assessors review the steel processors quality system and undertake dimensional and tolerance checks on finished product. Assessors confirm that product complies with the manufacturing schedules and tolerances of the Concrete Structures Standard AS 3600.

Where reinforcing bar is produced "off-coil", ACRS assessors take samples of the various bar diameters; have them independently tested; and compare the results with batch release tests from the supplier of the steel. Off-coil machines significantly alter the mechanical properties of the reinforcing bar, unless strict manufacturing controls are in place. ACRS assessments confirm that a processors operation maintains the steel within specifications.

For the full list of certified steel processors visit our web-site www.acrs.net.au.

NINE MESH MANUFACTURERS CERTIFIED

The level of interest in the design and construction community over the ductility and performance of reinforcing meshes has been one of the drivers for companies seeking certification of their mesh manufacturing facilities.

The achievement of the required ductility in reinforcing meshes is not easy to deliver or maintain. ACRS assessment looks not only at the batch by batch compliance but also at the long-term quality of mesh produced by a site. Long term quality monitors yield strength; uniform elongation (the key measure of ductility); and tensile to yield strength ratio.

ACRS has certified nine (9) mesh manufacturing sites around Australia. Several more are waiting assessment.

ACRS AUDIT COMMITTEE CONSTITUTED

ACRS commitment to impartiality and confidentiality has resulted in the formation of an Audit Committee to review recommendations for certification; resolve conflicts, if they arise; and set priorities and direction for our assessment team.

The Audit Committee is chaired by Dr John Fenwick, ACRS Austroads representative. John's role with Queensland Main Roads has given him great credentials in quality assurance and certification. The Audit Committee reports to the Council but does not contain any steel industry representatives. This ensures that confidentiality is preserved.

AUDIT COMMITTEE MEETS WITH NATA

The Audit Committee met with senior representatives of NATA earlier this year. The meeting was convened to discuss a number of issues relating to testing of steel, which had emerged during ACRS initial assessments. ACRS assessors had investigated a number of variances between applicants test results and the independent test results. These variances were discussed with NATA, while the purpose and progress of ACRS was outlined to them. We anticipate that our comments and experience will assist NATA in their laboratory certification activities and for ACRS and its certificate holders improve confidence in their test results.

STANDARDS WATCH

PRESTRESSING STEELS PROGRESS THROUGH PUBLIC REVIEW

The long-awaited revision of Australian Standards on prestressing steels has been through Standards Australia's public review process and the sub-committee has considered extensive comment received. The current Executive Director of ACRS, Mark Turner, recently returned from international meetings on reinforcing and prestressing steel in Quebec Canada, bringing with him copies of draft Euronorm Standards for prestressing steel. These have been passed on to the Standards Committee. The draft Euronorm Standards provide guidance on frequency of testing for batches and for type tests, such as relaxation in tendons.

The Euronorms are written on the assumption that third party certification is compulsory (as indeed it is in many European countries). However, ACRS certification of strand will remain voluntary, but we will use the guidance given in the Euronorm to establish cost-effective and relevant assessment procedures.

CONCRETE STRUCTURE STANDARD AMENDMENT AND PUBLIC REVIEW

Standards Australia will shortly publish an amendment to AS 3600. This amendment affects the use of reinforcing mesh in suspended concrete slabs. A new set of "moment coefficients" is being introduced into the Methods of Analysis section. The coefficients are derived from an elastic analysis of various slab systems and do not rely on ductility or moment redistribution. While this amendment is to be published in September, its adoption into the Building Code of Australia may be delayed until May 2005.

Meanwhile, the Standards Committee BD-002 has approved a major revision of AS 3600 to be issued for Public Review. This major revision will have an impact on how steel reinforcement and strand is specified and used.

The materials properties section specifies steel in terms of its characteristic values and, in some instances, the mean values of key mechanical properties. Demonstration of compliance with the steel and strand specification is vital for manufacturers and processors. We believe that ACRS third party certification will be the best method for demonstrating compliance.

COMMENTS ARE WELCOME

The Council of ACRS welcomes comment and feedback from the construction industry, to ensure that its programme is relevant, focused and meets the needs of participants and users.

FOLLOW UP ASSESSMENTS COMMENCE

The first certificates by ACRS were awarded just 12 months ago. Our assessment team have commenced the first round of annual follow up audits with these companies.

The follow up audits aim to sample and test the full product range over a three or four year period. The ACRS assessment has set a number of priorities for this years follow up, including:

- a Review of test procedures, where variances were identified (see NATA article).
- b Weld-shear test results for mesh results.
- c Off-coil bar besting from satellite site. A number of certificate holders have "satellite" sites where the product is sampled and tested in accordance with AS/NZS 4671 and included in the principal site long-term data. We will be visiting some of these sites to obtain audit and duplicate samples.

Please mail or fax any comments as follows:

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