



Health and Safety Executive		Sector Information Minute	
Manufacturing		SIM 03/2003/02	
Cancellation Date	25/02/2007	Open Government Status	Fully Open
Version No & Date	1: 25/02/2003	Author Unit/Section	Engineering & Utilities - Newcastle

Target Audience
 AFQ Inspectors
 SG Specialist Inspectors (Mechanical)

**SAFE WORKING AT COLD ROLL-FORMING LINES
 CODE OF PRACTICE FROM THE COLD ROLLED SECTIONS ASSOCIATION**

This SIM updates the information previously contained in FIC 604/1 on a revised Code of Practice for the *Safe working of cold roll-forming lines* published by the Cold Rolled Sections Association. Advice is also given on the acceptability of trip wires as a means of safeguarding.

BACKGROUND

1 In cold roll-forming, precision-formed metal shapes and sections are manufactured from coiled, narrow strip by the action of forming rolls. Cutting-off tools/dies in a cut-off unit produce the final dimensions of the product. Welded steel tube manufacture is a similar process but here the material is automatically seam welded at a weld station located between the forming rolls and cut-off unit.

2 The Cold Rolled Sections Association (CRSA) is a grouping of 12 companies, employing over 2000 people, producing precision formed shapes, products and systems by the cold roll-forming process. It is based at the National Metalforming Centre, 47 Birmingham Road, West Bromwich, West Midlands B70 6PY (Tel: 0121 601 6350, Fax: 0121 601 63573) and further information about the Association can be found on its website (www.crsauk.com).

3 The activities of the CRSA include setting and maintaining standards of quality, which encompasses health and safety. In 1980 the Association produced a Code of Practice for the '*Safe working of cold roll-forming lines*' - sometimes referred to as the 'Blue Book' - its aim was to draw attention to the hazards in operating cold roll-forming lines and present the best practices in current use.

4 In 1999/2000 a working group of representatives from the industry and HSE's Engineering National Group carried out a review of the guidance and a copy of the revised Code has been issued to subject file 604.

ADVICE TO INSPECTORS

5 The hazards covered in the Code include manual handling, slips and trips, noise and hazardous substances as well as machinery safeguarding. Although some of the references to British and European Standards for machinery safety are already out of date, following the Code should ensure adequate standards of health and safety in this industry.

6 As in the 1980 edition, the revised Code makes a distinction between the precautions required to safeguard the intake of the forming rolls, where approach is foreseeable, and those required for the strip and rolls during normal running where access is generally less frequent. However, the options in the 1980 edition to prevent the risk of injury to the operator or other person from the moving strip or rolls included the provision of trip wires where conventional guarding was not practicable. The trip wire however, primarily acting as a stopping device and not as a protective device.

7 The use of trip wires does not appear in the 2000 version but inspectors may still come across them, particularly on older machines. While they may be used as secondary devices, eg to provide an easy stopping system for protection against contact with the moving strip, they are no longer considered to be an adequate means of safeguarding the dangerous parts of the machine. In such circumstances, the required standard of safety is that set out by the Provision and Use of Work Equipment Regulations (PUWER) 1998. Access should not be possible to any dangerous parts of the machine and the hierarchy of safeguarding established by PUWER should have been fully considered. The use of trip wires as the sole means to safeguard a cold roll-forming line will not, in most cases, fulfil these requirements. In such cases the standard of guarding should be upgraded to that detailed in the CRSA Code. The need for such action has been raised with the CRSA, which has expressed concerns about the possible financial implications for member companies with a large number of cold roll-forming lines where reliance is placed on the use of trip wires. In such cases and where inspectors feel that on the basis of the Enforcement Management Model an Improvement Notice is appropriate, they are asked to consider the above concerns when agreeing the timescale for compliance with the employer.

8 Machines may vary considerably in age, size, number of sets of rolls and the volume of production runs for a particular section. Also, a significant proportion of the working time may be spent in setting, roll changing, adjusting and cleaning operations. The method of safeguarding that can be used will depend on these and other factors, particularly the frequency of access to the dangerous parts, for example for setting, adjusting, etc. If photoelectric devices are fitted care should be taken to ensure they meet the specifications detailed in the CRSA Code and HSG 180 *Application of electro-sensitive protective equipment using light curtains and light beam devices to machinery*. Inspectors should contact their specialist group (mechanical engineering) inspectors where local issues arise or where practical difficulties are encountered in upgrading the standard of safeguarding.

9 Inspectors may wish to note that draft European Standards are in preparation detailing the safety requirements for tube forming and rolling mills and for cold flat rolling mills. Neither standard contains reference to the use of trip wires as a safety measure.

ENQUIRIES

10 For further advice, contact the Engineering & Utilities Sector (Graham Watson in the Newcastle-upon-Tyne office VPN: 519 6297 or Tel: 0191 202 6297).

CANCELLATION OF INSTRUCTIONS

11 FIC 604/1 - **cancel** and **destroy**.

Date first issued: 25 February 2003

TOP A