

# ANNEX 23

## Preparation procedure by straightening of steel samples from coils, for mechanical characterisation

### 1. Introduction

The purpose of this Annex is to lay down the conditions governing the preparation and straightening of samples extracted from supplies of corrugated steel coils which must be carried out prior to all of the mechanical characterisation tests set out in this Code.

### 2. Sampling

Samples shall be extracted directly from finished coils, ready for supply. Complete spires shall then be extracted from the coil.

Each time samples are taken, a total of three spires shall be obtained from each coil subject to inspection. From each spire, two equal samples shall be obtained, consisting of half spires.

From each spire, one of the samples (half spire) shall be used for the inspection laboratory tests and the other, duly identified with the corresponding seals, shall be held in safekeeping by the manager of the facility at which sampling is carried out (steel fabrication plant, ironwork fabrication, construction site, etc.), where they shall be stored, without being deformed or handled, in order that they be accurate as re-test samples for a period of one month following the sampling date.

### 3. Equipment for the preparation of samples by straightening

The samples extracted from the coil shall undergo a straightening process using a suitable machine. This machine shall have a total of eight rollers of equal diameter (four drive rollers to move the steel along and four other free rollers), which may be manoeuvred into a vertical position in order to adjust the axis of the bar, and shall be staggered, as shown in Figure A23.1. Table A23.1 indicates the diameter of the rollers and the spacing between them.

Table A23.1

Type of roller	Geometric characteristics			
	Roller diameter (mm)		Horizontal spacing between rollers (mm)	
	$\varnothing \leq 12$	$\varnothing > 12$	$\varnothing \leq 12$	$\varnothing > 12$
Drive or free	$140 \pm 2\%$	$180 \pm 2\%$	$175 \pm 2\%$	$330 \pm 2\%$

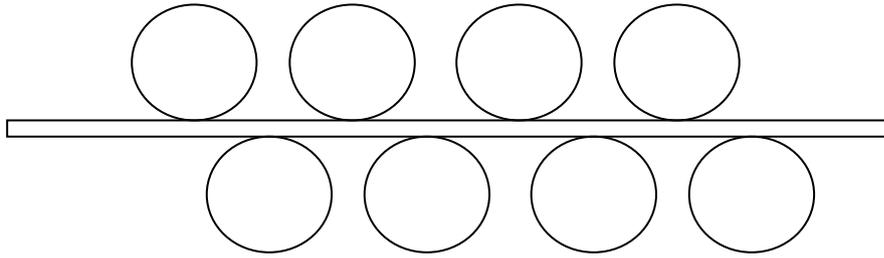


Figure A23.1

The straightening machine must keep a continuous record of the conditions under which the straightening is performed (position of the rollers, speed of the machine, etc.).

#### **4. Procedure for the preparation of samples by straightening**

Once the sample has been straightened, 35 cm shall be taken off each end. The effectiveness of the straightening shall then be checked, with any straightened half spires being rejected where, once the ends have been taken off, there is a greater than 5 mm/m deviation from straight alignment. The samples may then be cut for subsequent mechanical characterisation testing in accordance with the procedures laid down in this Code.