



MCRMA TECHNICAL APPRECIATION COURSE

Dudley College, Construction Apprenticeship Training (CAT) Centre

Day One

10.00-10.15 **Introduction to course and domestic arrangements**

10.15-11.30 **Building process**

A typical route, from the client identifying the need, through design, specification and construction to final handover; identifying the function and decisions made by the key personalities. This will also briefly introduce all aspects of the building performance which will be covered in more detail later in the course.

11.30-12.45 **Steel structure**

Steel frame. Examination of typical frames, including a detailed discussion on purlins and rails. Explanation of loads the building must withstand and the importance of the interaction between cladding and steelwork.

12.45-13.15 **Lunch**

13.15-14.30 **Cladding systems and components**

Explanation of the advantages and disadvantages of various shapes and types of profiled and composite metal cladding. Showing examples of typical specifications, load tables etc. Flashings. Discusses the details at ridge, eaves, verge, corner, cill, door and window. Rooflights. Explains the most common materials and constructions used, critical aspects of the design and common problems. Penetrations. Covers the most common types of roof and wall penetrations.

14.30-14.45 **Tea break**

14.45-16.30

Building Performance

Thermal performance. Explaining U values, thermal insulation and thermal bridges in cladding and gutters.

Condensation. Explains how it can occur, why it may be a problem and what can be done to minimise it.

Corrosion and coatings. Consider briefly why corrosion occurs, including the electrolytic action between different metals and atmospheric effects. How it can be controlled using different coatings such as zinc and paint. Looks particularly at profiled metal sheets, cold rolled sections and highlights areas of weakness.

Acoustics. Explains acoustic terms and principles, describes the most common metal cladding construction and discusses performance.

Fire performance. Shows why fire performance is important with regard to Building Regulations and insurance companies. Explains the various standard tests for Class 0 and Fire Resistance and their significance for profiled metal clad buildings.

16.30-16.45

Summary and review

Day Two

09-00 -10-15

Working at Height (WAH) 2005 legislation
Video "Getting it right at height", with class discussion
Risk assessments and method statements for the practical work

10-15-10-30

Tea/coffee break

10-30-11-00

Looking at the material schedules and detail drawings of the rigs.

11-00-11-15

Practical setting up of hand tools and power tools with issues on PAT testing etc. with demonstration of each tool

11.15-12.15

Setting out and levelling using levels and measuring equipment

12-15-13-00

Lunch

13-00-16.30

Roofing and cladding installation

NB: Delegates must supply hi-viz jacket, safety boots, safety glasses, hard hat. (These items should be available from your company)

Installing double skin wall cladding to include, lining panels, internal corners.

Cutting window openings and making and fixing internal window closures and spacer system.

Measuring, marking and cutting a drip flashing to a 90 degree external corner.

Measuring, marking and cutting wall cladding to external corner and window detail.

Measuring, marking and cutting and fixing weathering flashings to detailed junctions to include, external corner, window cill, jamb and head flashings

16-30-16-45

Summary

Day Three

(Breaks to be taken when convenient)

08-30-16.30

Continuation of roofing and cladding installation from the previous afternoon

16-30-16-45

Summary and close