TRADE OF PLASTERING

PHASE 2

Module 2

External Work

UNIT: 6

Modern Day Finishes

Produced by

SOLAS

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Further Education and Training Authority

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Table of Contents

Introduction

Welcome to this section of your course which is designed to introduce you the learner, Monocouche Decorend and calculate materials for one coat work.

Unit Objective

By the end of this unit each apprentice will be able to:

- Describe Monocouche Decorend One finishes
- Estimate and calculate materials for one coat work

1.0 Describe Monocouche Decorend One Finishes

Key Learning Points

- Render Coat: colour, finishes, function, storage, preparation for machine application and comparison with other external finishes

1.1 Render Coat

Render coat is a ready-mixed, cementitious, external render suitable for most types of brick or blockwork. Factory produced from carefully selected raw materials for consistency of product, it only requires the addition of water on site. The through colour and one coat feature allow fast application and short programme periods thereby reducing associated scaffolding and site costs, making ground works available for completion more quickly.

Render coat is applied by traditional hand tools and is finished flat with a scraped finish that features a slight mica reflection and has excellent water resistance and durability, whilst allowing the structure to breath It may also be mixed and applied by continuous mixing and spraying machines.

Substrates must have a good mechanical key suitable for rendering it may be used as a top coat where a multi-coat application is required and the matching of colour and texture is essential.

Render coat is specifically formulated with the demands of the house builder in mind and is available in a range of 10 standard colours.

Preparation

Scaffolding must be independently tied to allow for an uninterrupted application. Any faults in the structure, particularly those which may lead to moisture penetration must be rectified.

To avoid dampness and discolouration rendering should be avoided below DCP and within 150 mm of ground level.

All surfaces must be sound, clean, suitably dry and free of any material which may impair adhesion.

Arises and feature stops may be formed using clean straight timber battens. Alternatively, suitable beads may be used. But with a scraped finish, these will be evident and must be accepted as a feature. Please note that the scraped renders may during the scraping process, tend to spall away from the nose of some angle beads. Cover with masking tape as required. Edging tape must be removed before the material has dried. Expansion joints should be included as required by the substrate and carried through all applied materials.

Do not apply to gypsum plaster on previously painted surfaces.

Mixing

Render coat should be mixed with clean water at a rate of approximately 5-6 litres per 25kg bag using either a drill and whisk or tumble mixer. For best results, use as little water as possible and mix to give a workable consistency. Re-mix product to regain a suitable workable consistency but do not add any more water. To ensure colour consistency, the materials required for complete and adjoining panels should be of the same batch number or be thoroughly mixed together before use. Panels should be completed in sequence around the building.

Application

Render coat should be applied to the suitable substrate in a one-coat operation to a thickness of 18 mm or in a two-pass application to a maximum thickness of 28 mm (2-3 mm will be removed by the scraping process to give a finished thickness of minimum 15 mm maximum 25 mm). It should then be ruled level and allowed to harden for between 5 and 16 hours (sometimes a longer period may be necessary depending on weather and background conditions).

When the material is green (set but not fully hardened) it should be scraped in circular motions using a scraping tool. It is essential that this is done carefully and evenly ensuring all laitance is removed and that no part is missed. Thoroughly brush down the surface of the scraped finish using a soft bristle brush.

Render coat will set and gain hardness in a similar manner to conventional renders. Do not apply in rain or temperatures below 5°C or if exposure to these conditions is likely during setting and curing.

Protection from unfavourable weather conditions should always be provided during application and early age curing.

Curing

Curing with a fine spray of water may be necessary during rapid drying conditions in hot climates this is essential for 3 to 5 days after application.

Packaging and coverage

Render coat is supplied in 25 kg paper sacks. To achieve a finished thickness of 15 mm coverage is approximately 25 kg per m^2. These estimates take no account of wastage and will vary according to the type of surface involved and method of application.

When stored unopened in a dry place at temperature above 5 degrees the shelf life is 12 months from date of manufacture.

Please refer to manufacturers spec.

2.0 Estimate and Calculate Materials for One Coat Work

Key Learning Points

- Estimation and calculation of materials for one coat render (quantities and cost)

2.1 Estimation and Calculation of Materials for One Coat Render

Principles of Pricing

Pricing for plastering can be done in two ways:

1. Pricing for only supplying Labour, with the materials being supplied by the builder or client. This is known as 'Labour Only'.
2. Pricing for supplying both labour and materials required. This is known as 'Labour and Materials'. Even if you are pricing labour only, the client may ask you to let him have a list of materials required. As you can see, it is essential for you to have a good knowledge of all areas practical calculations.

Amount of Materials Required

To calculate the amount of materials required, you will need to know the covering capacity of different materials. That is to say, how many square metres of work can be covered with a bag of plaster? If you go to your local builders' merchants they will supply you with a guide. Not only will this advise you on suitable plasters for different backgrounds, but will also list the covering capacities of the different plasters.

The covering capacity will be given as the amount of work that can be covered by one tonne of material. This need not cause any confusion. You will need to know that there are 1000 kilos to 1 tonne. There are 40 bags of plaster to 1 tonne. Therefore each bag weighs 25 Kg's (1000÷25 = 40).

Example:

Two coats cement plaster 19 mm thick on brick walls (1:3 mix)

Basic Rates

- Cement €182.00 per tonne
- Washed sand €12.00 per tonne
- Unload and stack 1 ton per hour @ €16.90

Mix by volume

1 m^3 cement = 1 ton app@€196.90

3 m^3 sand = 3 ton app@€36.00

Allow 20% for reduction in bulk therefore add 25%

4 m^2 costs 196.90 + 36 + 25% = €291.25 or €72.78 for 1m^3

Covering capacity @ 19mm thick is 1000/19 = 52.6 m^2 per ton

52.6 m^2 @ €72.78 per cubic m

Allow 5% waste = €76.42

Therefore cost per m^2 @ 19 mm thick is 72.78/52.6 = €1.38

Labour

Squad of 2 tradesmen and 1 labourer will produce 5.50 m^2 per hour

Therefore 1 m^2 costs €1.38 by 5.50 = €7.61 Profit and costs 20% = €9.13 per m per hour

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