Check and Prepare Existing Plaster

General

Prior to undertaking any repairs, the information supplied may not reveal and detail all defects or pertinent information related to the condition of this building. Such information may be reliant on a full independent inspection report. Cracks will form in concrete, plasters, and other cementitious surfaces as they cure and as a result of excessive movement, such as the building settling / structural movement or an earthquake.

The repairs below outline what you can do to repair each instance where the cracking is isolated. Where there is widespread cracking of any of the following cracks, then generally, a full mesh system over the system will be sufficient. However, you will want to investigate the substrate/structure further, and further remedial work may be required.

Capillary Cracks

Their occurrence is not at all unusual and dealing with them is relatively straightforward. Concrete and plaster 'cure' as water used in the 'wet' mixture dries out, inevitably resulting in small surface or capillary cracks forming. They are easily covered by a paint system such as X200.

Minor Hairline (less than 1mm)

Hairline cracks are bigger or wider than capillary cracks, usually up to 1mm across. This is significant when you consider a layer of Resene Lumbersider is applied at only .035mm. In other words, it would take 35 coats of Resene Lumbersider to achieve a paint film that was 1mm high. Hairline cracking often occurs as the cementitious surface (usually plaster or render) cures, especially if it is hot or dry, as water in the concrete mixture evaporates quicker than it would normally. Resene X-200 is ideal for brushing into hairline cracks with three coats easily filling a 1 mm crack. Alternatively, a Resene Brushable Crack Filler may be used. Once the repairs have been completed you will need to coat the wall using 2 Coats of Resene X200.

Cracking (1-2mm)

Cracks larger than 1mm will need to have a plaster bandage applied over them prior to retexturing the wall surface. Where there are a number of cracks (regardless of size) on the wall surface, it is generally recommended that replastering and re-meshing be undertaken.

Structural Cracking (Greater than 2mm)

Where cracking is greater than 2mm in width, it must be ground out, making sure to taper an area away from both sides of the crack. Apply Rockcote MultiStop and embed a strip of mesh no less than 75mm wide over the crack, forming a bandage. You will then need to re-texture the entire wall with a mineral or acrylic-based texture, making sure that one coat of Limelock has been used as well as two coats of Resene X200.

Control Joint

A controlled Structural Crack is generally installed where there is a lack of a control joint. A structural control joint is created in an existing plaster surface using an Electric Grinder or hand tools and should cut through the plaster and substrate. A control Joint should be between 6-12mm. Once formed a PEF Rod should be inserted into the control joint to form a good seal and then a MS Sealant is used to seal the newly formed control joint. In most cases, a Control Joint will generally require taping either side of the joint and repainting of the joint only.

For more information about control joints refer to the technical note on the Resene Construction webpage at the following link https://reseneconstruction.co.nz/control-joints/

The main contractor/substrate installer is responsible for all control joints, which must comply with the substrate supplier’s specifications.

Re-mesh Walls

Where extensive cracking or delamination has occurred on a wall, you will need to replaster and embed mesh on the entire wall surface. First, you should determine what has caused the cracking. Prior to undertaking any work that requires re-meshing a wall, make sure an independent report has been furnished to you that identifies the cause of the problems on the wall. You will need to make sure that other third parties complete any targeted repairs to other building components prior to you starting your plastering.

Delamination

Where delamination has occurred, make sure that you remove all loose material. You will then need to provide a key for the new plaster to adhere to. This would be a slurry of acrylbond and MultiStop.

Multiple Cracks

Where multiple cracks have occurred there will be a high probability that there is a need for a Control Joint to be formed. Follow the guidelines set out earlier in the specification to determine how to repair the multiple cracks.

Once you have remedied the cracks, you will need to re-render and mesh the entire wall surface. Make sure that you have applied a mixture of Acrylbond, Water, and MultiStop to form a key before applying any renders. You will then need to retexture the entire wall with a mineral or acrylic-based texture followed by 2 coats of X200.

Clean Surface

When the substrate has been left for a period of time, dust and dirt may build up on the surface. This contamination must be removed prior to render application.

Masking

Before applying the render, masking must be applied to all joinery, pipes, roofs, and all areas likely to be marked by the render. Use drop cloths and ground covers to keep the working areas clean.

Colour selection

For more information about light reflectance values refer to the technical note on the Resene Construction webpage at the following link https://reseneconstruction.co.nz/light-reflectance-values/