CONQUEROR NZ
PIR INSULATED PANEL

MAINTENANCE INSTRUCTIONS

FOR

PIR INSULATED PANELS

Contents

1 Introduction

- This section of your manual is designed to assist you to obtain the full benefit of the low maintenance design of our Conqueror NZ Insulated Panel System installed to your building, and to ensure that it continues to meet your requirements.

- Should you have any queries regarding our recommendations or if, for any reason, you consider that either our products or service can be improved, please do not hesitate to contact our Office in Christchurch on **0800 799 923**.

2 Regular Maintenance Inspections

- We recommend that a comprehensive maintenance inspection covering all areas of your new facility be conducted regularly. Virtually all the common maintenance items can be inspected visually.

- **Benefits of regular inspections are:**
    - Prevention of problems is better and less expensive than rectification
    - If problems do exist or develop over time, early detection will minimize the extent of any damage and subsequent rectification work.
    - An owner's commitment to an organized maintenance program will undoubtedly increase the overall life and serviceability of the materials and the system.

- Record should be kept showing frequency and details of inspections to ensure that warranties remain in place. Records must also be kept where maintenance work is carried out.

3 Maintenance

3.1 General Maintenance

- The panelling used on this project has the following specification:

  Type: Roof and Walls

  Colours: Titania/Titania

  Steel facia: New Zealand Steel-Colorsteel Endura

- The New Zealand Steel surfaces of the panels are designed to be very resistant against weather, wet conditions, and frequent non-abrasive & non-corrosive cleaning.

- Under normal conditions the surfaces will remain fully serviceable for years. Repainting or touch-up should not be required unless the surface is damaged in some way.

- Common forms of damage are scratching, denting and solvent attack. If damage has occurred, the surface must be repaired promptly and correctly.

3.2 Precautions

3.2.1 Avoid Contact with Incompatible Metals

- To avoid the possibility of corrosion, it is not advisable to allow metal other than aluminium, zinc or stainless steel to come in direct contact with New Zealand Steel surfaces.

- Care must be exercised in the location of discharge pipes from Air conditioning units, hot water systems etc. to make sure that they do not discharge onto or against any New Zealand Steel surfaces.

- Copper pipes and Lead flashing should not come in direct contact with New Zealand Steel, as both these metals can causes corrosion.

- Swarf from drilling, grinding or filing work that clings to a wall surfaces or rests on a ceiling surface can rust and/or damage the surface. Any swarf from such work must either be prevented from getting onto the surface or be thoroughly cleaned off prior to the surface getting wet or damp, or at least at the end of the day or the work being done.

- Ensure Fixings used on New Zealand Steel are to Australian / New Zealand Standards.

3.2.2 Avoid Contact with Unprotected Steel Supports

- The use of uncoated/unprotected steel supports for the New Zealand Steel is discouraged as the possibility of corrosion of the overlying sheeting may be greatly enhanced.

- Post painting with an appropriate high build industrial coating system or galvanization is necessary where heavy steel sections such as hot rolled steel angles are necessary for structural requirements.

- These procedures are regarded as imperative to prevent the deterioration of steel member and consequently the rapid degradation of the sheeting.

- Advice should be sought from reliable coating manufactures regarding the specification of an appropriate coating system which offer suitable corrosion resistance for the particular exposure environment.

3.2.3 *Avoid Contact with Concrete or Soil*

In Concrete

- New Zealand Steel surfaces are not recommended for immersion in wet cement as rapid corrosion and degradation of coating alloy will occur.

- Leaching of concrete lime will also severely corrode the painted surface.

- Suitable impervious material must be used as a barrier between concrete and panel surfaces and or maintain sufficient spacing between New Zealand Steel surface and concrete. (Approx. 25mm minimum)

In Soil

- The placement of garden beds adjacent to the building where soil comes in direct contact to the New Zealand Steel surfaces is strongly discouraged as corrosion of the sheeting will rapidly occur to the area covered with soil.

- If external wall panel surfaces are located close to the ground or near garden beds, an impervious material must be used as a barrier to separate any soil, grass cutting, leaves, compost, mulch or other garden bed substances from the panel surface. Keep any brushes and shrubs trimmed to avoid contact with wall surfaces.

- Any Moisture or moisture retaining materials should not be permitted to remain in contact with the New Zealand Steel surfaces. Such contact will ultimately result in corrosion of the panel surface.

3.3 Sealants

- Regular inspections of the sealants around any exposed fixings or screws and around overlaps flashings and aluminium extrusions, is recommended at least once a year. If any deterioration, breakdown or loss of adhesion of the sealant is evident, re-sealing work may be required.

- Any other generic type of sealant considered should possess similar properties to neutral cure silicone rubber if long term performance is required.

- These properties should be:
    - Good adhesion
    - resisting extremes of both heat and cold while retaining good flexibility
    - provide very high resistance to the damaging effects of UV rays
    - No acidic additions (may adversely affect steel)

- Paint will not adhere to a surface contaminated with sealant. To improve adhesion a light abrasion is required to remove traces of silicon. Care should be taken to avoid damage to the protective exterior finish of the steel surface.

- An alternative is to use paintable silicones.

3.4 Flashing Materials

- Lead is not compatible with the New Zealand Steel surfaces, direct contact with or receiving run-off water from Lead is prone to corrosion.

- The recommended flashing materials that can be used are zinc or aluminium.

- Roof and wall penetration flashings are also available in a wide range of rubber and aluminium materials.

- In the event of roof renewals where Lead flashing already exists, the New Zealand Steel surface should be protected from the flashing by a suitable barrier if re-use is desirable. This can be achieved by painting the surface of the Lead flashing. Painting the top surface of the Lead flashing will also protect the New Zealand Steel surface from run-off water.

- Another method to separate the surfaces is to use plastic film that is sufficiently robust so as not to tear (e.g. Polyethylene damp-course).

3.5 Cleaning

3.5.1 External Cleaning

- Most external surfaces are normally automatically washed by rainwater only. External surfaces that may require cleaning from time to time would include areas where a build-up of dirt or grime can occur, such as window/door sills and reveals, overhangs, architectural details, and areas close to the ground.

- Areas which are not regularly washed by rainwater should be hosed down at least every six months and more frequently in coastal areas where marine salt sprays are prevalent, and in areas where high levels of industrial fallout occur.

- If the regular maintenance referred to above does not remove all dirt, the following procedures should be carried out:
    - Wash the surface with a mild solution of pure soap or a mild non- abrasive kitchen detergent in warm water
    - Application should be with sponge, soft cloth or soft bristle nylon brush.
    - The surface should be thoroughly rinsed with clean water immediately after cleaning to remove traces of detergent.

- Never use abrasive or solvent type cleaners like Turps, petrol kerosene or paint thinners.

3.5.2 *Internal Cleaning*

- Internal surfaces of panels often do not require any serious cleaning. However, in specialized food and/or other production facilities and clean rooms, regular cleaning will be required as part of the normal operation of the facility. Depending on the purpose of the facility, special cleaning and/or washing regimes will need to be developed and implemented.

- If a surface needs to be washed:
    - Wash the surface with a mild solution of pure soap or a mild non- abrasive kitchen detergent in warm water
    - Application should be with sponge, soft cloth or soft bristle nylon brush.
    - The surface should be thoroughly rinsed with clean water immediately after cleaning to remove traces of detergent.

- Never use abrasive or solvent type cleaners like Turps, petrol kerosene or paint thinners.

- Grease and oil deposits can be removed by washing with free-rinsing, oil- emulsifying alkaline degreasing detergent.

3.6 Access

- Extreme care should be taken when working at height and access to a higher wall surface is required. All equipment to be used (tools, ladders, scaffold, handrail etc.) must comply with current Work Place Health and Safety Regulations.

- Avoid damaging the wall surfaces with ladders or other equipment by applying adequate soft and cushioned protection to any items that may have direct contact with the wall surface.

3.7 Repair Work

3.7.1 Scratches

Most scratches can be satisfactorily repaired by carefully touching up the affected area using approved touch-up paint. This may be in the form of an aerosol spray pack or liquid paint. Use the correctly coloured paint. The colour for this project is specified above.

It is important that any scratches are repaired quickly as corrosion of the base metal can occur within a few days. If a scratch has penetrated the painted coating and exposed bare metal, rusting and staining can occur within hours. In this case immediate action is recommended.

3.7.2 Dents

If the surface is dented, two options of repair should be considered:

- If the dent is not an aesthetic problem, simple touch-up is satisfactory.
- If the dent is unsightly and needs to be removed, filling and re-painting of panel skin will be required.

3.7.3 Solvent Damage

If the existing painted coating is damaged through attack by solvents or other corrosive substances, the affected area will need to have all traces of the substance and damaged paint removed, and the surface will need to be repainted.

3.7.4 Holes

Holes in the New Zealand Steel caused through impact or drilling will require filling and repainting of the panel skin.

3.7.5 Vapour Barrier

Regular inspection of panel skin and all joints is recommended to ensure that a vapour barrier is maintained. Vapour sealing of all joints is essential in cold storage applications. Vapour seals are made on the outside (warm side) of the building envelope. Sealed New Zealand Steel flashing should be used to repair any penetration so as to maintain the vapour barrier.

4 Cutting Panels

- Appropriate cutting tools and PPE must be used to carry out any form of cutting to panels on site. Large holes or section cut outs should be completed after panels is fixed securely to support structure; smaller holes can be cut out pre- installation. Various appropriate cutting tools can be used to cut panels on site. It is recommended a cold cut circular saw with 185mm Blade-48 tooth be used. Initial metal skin cut to internal and external metal skin should be made first after which the core insulation can be cut with a hand saw. Do not use hot cutting methods or grinders to cut panels as heat and sparks generated by the blade may cause damage to the panel surface. Ensure all swarf is removed from the surface of panel after cutting.

5 Assistance

- Please remember that in all instances if you notice anything that appears unusual or are unsure about any maintenance or repair issue, please do not hesitate to contact Conqueror NZ to discuss these items. We will endeavour to provide advice or recommendation on any necessary course of action that may be required to rectify issues and or arrange an inspection if required.

Conqueror NZ
57 West Coast Road
Yaldhurst
Christchurch 7676
Phone: 0800 799 923
Email: info@cnzltd.co.nz