

Guide lines and Good working practices.

Mirror Aluminising at the William Herschel Telescope

Introduction

The object of this report is to highlight a safe system of working practices that reduce the risk of an accident primarily to personnel and secondly to the mirror and its optical surface.

Good working practices.

- **Select team and assign tasks prior to the mechanical handling operations.**
 - Task leader (KMD or Doug or RGT)
 - 25 Tonne crane operator (SRB or MVDH or KMD)
 - Banksman (person who signals)
 - Team members (another 3 to 4)
 - Coating and cleaning Specialist. (Juerg, MFB)
 - Cleaning team members. (Juerg selects)

- **Effective Communication.**
 - Task leader co-ordinates and manages work.
 - Task leader communicates with other institution when applicable. The other institution should read these good working practices. They should also nominate a senior single point of contact.
 - The crane driver takes instructions only from the banksman.
 - Information on readiness to lift from team members is passed through banksman.

- **Environment and security**
 - Area should be clean and tidy. Floor surfaces should be inspected for spillages or potential trips and slips hazards.
 - The whole operation should be conducted in a calm unpressurised environment. Time constraints are secondary.
 - When mirror-lifting operations take place or the mirror is exposed access to the dome area shall be controlled from the ground floor and level 1 and 2 access doors shall be locked off.

- **Lifting Operations.**
 - Nobody must be allowed directly under the mirror when it is being lifted. Staff need to be under the mirror when positioning mirror stands. Stands must always be under the mirror before personnel.
 - Crane operator is the only person who should be working above or at a higher level than the mirror.
 - The crane operator and team members must not have any objects in pockets and remove watches. Spectacles can also be a problem and if staff working close or near to the mirror need to wear them they must be secure.
 - All lifting equipment (ING or other institutions) must be certified and checked for correct rating and condition. NB Please take care with C.W.T. rating (correct conversion to Kg is essential), this can be confusing to non-UK persons.
 - Before any lift takes place one individual should make a final inspection of all shackles, slings and lifting equipment.

- **Cleaning**

- Follow COSHH for using caustic soda and other chemicals used for cleaning off the aluminium.
- All staff must wear protective clothing and safety goggles when cleaning.

Kevin Dee

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10/05/2002