



LIGHTNING CONDUCTOR INSTALLATION TO BS6651 : 1999

Chimney-stacks of all construction types are, inevitably and in most cases, the highest structures to boiler-house and plants. Therefore lightning protection is required to combat a lightning strike.

Whether steel stacks, which require terminal bonding, or conventional air terminal systems attached to down conductors, these systems require annual inspection and competent personnel to test isolated earth terminations as well as continuity and resistance testing of components to ascertain that there is no high resistance defects which may affect the systems performance.

STEEL CHIMNEY STACK FABRICATION & ERECTION

Design and Fabrication to BS4076 for mild steel & stainless steel Chimneystack.

SAFETY FIRST

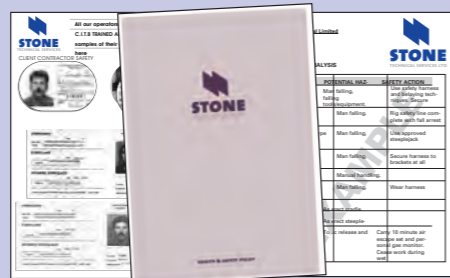
Prior to the start of a project, a pre-set meeting is held to discuss the specification, safety aspects and requirements for the site, including specific rules and regulations.

The Quality Plan, risk assessments, COSHH Sheets and method statements are bound into a Job Pack for each project and handed to the Site Manager, prior to the start of the work.

This Job Pack is returned on completion of the works.

Stone Services issue Work Instructions to all employees and staff in order to inform of changes in Safety or regulations that occur in our Industry and improved Methods of Safely carrying out work.

Each employee will receive a Safety, Health and Environmental Company Induction as well as a copy of the current Company Policies, as shown below.



INDUSTRIAL CHIMNEY STACKS



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LIGHTNING CONDUCTOR ENGINEERS TO ST. PAULS CATHEDRAL (LONDON)

REGISTERED IN ENGLAND AND WALES No. 3912476





INTRODUCTION TO STONE TECHNICAL SERVICES LTD

Stone Technical Services Ltd. operate within a wide cross section of industry across the UK, with an experienced workforce active within the industry, whose working knowledge and experience spans over 25 years of active on-site management and working practices.

To further enhance the company goals and objectives Stone Technical Services Ltd. obtained accreditation to BS EN 9002 in 2000.

The company also gained membership to the National Federation of Master Steeplejacks & Lightning Conductor Engineers together with Membership of the Steeplejack Training Group Association.

HEALTH & SAFETY

The Directors of the company are still active during on-site contracts, which is essential to enable us to fully appreciate the particular site requirements and procedures.

Companies on-going training plan

- Risk Assessment & CDM management certificated.
- CITB Trained & Registered Operatives
- CSCS Approved Operatives
- C.C.N.S.G. National Safety Passport
- Appointed Person accreditation (Lole Regulation approved operatives).
- C.I.T.B Slinger/Signaler
- First Aid Certified operatives.

SURVEYS

An Annual inspection survey for either steel, concrete, or brick chimney stacks will build a history of the ever changing structural stability.

It will help companies to establish planned cost over a period of time for the maintenance of the fabric of the structure, and planning to establish a planned regime to formulate a calendar of periodic remedial works as required.

- Laddered Visual Examination - Full written report - digital photos - recommendations
- Video surveys
- Non destructive ultrasonic testing to ascertain corrosion levels
- CCTV external & internal inspection with ground mounted monitoring facilities
- Test Lightning Protection Systems to BS6651 : 1999 & Cenelec Codes
- Concrete testing systems, reinforcing, depth on concrete coverage
- Carbonation testing

MAINTENANCE STEEL CHIMNEYS

Structural steel chimneys and flare stacks require annual maintenance inspection due to the nature of construction and the usually highly industrial areas in which they operate, N.D.T. thickness tests to plate work and chimney stack fabric including welds, Bolts to flanges, base plate mountings if free standing, support steelwork, guy rope systems.

Inspections should generally be in-line with HSE guidelines GS53.

- Inspection to GS53
- Fabrication & erection of Roll ring Damper Systems
- Surface Preparation
- Painting
- Welding fabrication
- Aluminum Cladding
- Insulation
- Guy Wire Servicing, Wind load calculations, Renewals
- Refractory repairs - rebuilds
- Steel linings
- Lightning protection to BS6651 : 1999 & cenelec codes

CONCRETE CHIMNEYS

Reinforced Concrete structures particularly those exposed to aggressive atmospheric conditions require regular inspection to monitor inherent conditions associated with concrete such as carbonation, shrinkage, fissures & cracks, also accelerated corrosion of reinforcement and possible delaminating of cover to rebar.

Chimney stacks suffer equally internally, where conditions are acidic generated by gas filtration to the inner windshield and areas where gases condense on the relatively cool inner face.

All these areas require monitoring during planned maintenance inspection and possible remedial works carried out to ensure a maximize life cycle for the structure.

- Structural/surveys
- Concrete repair systems
- Fracture injection repair systems
- Refractory Brick-work
- Steel linings replaced repaired
- Lightning protection to BS6651 : 1999 & cenelec codes
- Gas seal repair & renewal

BRICK/CHIMNEYS

Brick chimney stacks, which are not now as common, require careful inspection to ascertain overall structural stability, external brickwork should be examined to determine any movement to bed joints, cracking, fissures, and general deterioration of mortar. Internal sectional refractory brickwork linings require replacement, and remedial repair, also gas seals between corbel set-backs require inspection and repair periodically.

- Brickwork - Pointing
- Repairs to Step cracking (Helfix Approved Contractor)
- Fabrication & erection of External Restraining Steelwork
- Refractory repair-renew
- Gas Seal renewal & repair
- Painting systems
- Steel lining replacement & repair
- Lightning protection to BS6651 : 1999 & cenelec codes



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