



CONSTRUCTION AND
MAINTENANCE PRACTICES
OUTSIDE PLANT

SECTION 23

PART 111

HANDSET TELEPHONES -
DESCRIPTION AND USE OF
ETDA-20 AND ETWA-20 TELEPHONE SETS
FOR HAZARDOUS LOCATIONS

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111.1 **GENERAL:** This part covers the description and use of the ETDA-20 and the ETWA-20 explosion-proof handset telephones. The installation and maintenance of these telephone sets are covered in Part 112.

111.1-a These telephone sets are manufactured by the Automatic Electric Company in conjunction with the Crouse-Hinds Company.

111.1-b All components of these telephone sets which might produce sparking are sealed in specially designed housings; if gases penetrate them and are exploded, the housings are sturdy enough to contain the explosion without igniting the surrounding atmosphere.

111.2 **DESCRIPTION:** The ETDA-20 and ETWA-20 telephone sets consist of two main parts, the housing (cover and base) and the handset. Connection between the handset and the housing is made through a factory-sealed connector which screws into the cover of the housing. Connection between the handset and the housing of both the wall and desk instru-

ments is made through a factory-sealed connector which screws into the cover of the housing. Connection between the desk instrument and the required terminal conduit is made through a flexible, heavy insulated line cord assembly equipped at each end with a factory-sealed connector.



ETDA-20

Fig. 1



ETWA-20

Fig. 2

111.2-a Housing. The housings of both the desk and wall-mounted telephone sets are identical and consist of a cover and base arrangement. The cover and base are constructed of high strength cast aluminum. Six Allen Head screws fasten the sections together. One Allen Head wrench is furnished with each instrument. Equipment within the instruments is mounted in both the cover and base. A flexible cable with two attached plugs terminates on a terminal strip in the cover and plugs into a set of sockets mounted in the base. This arrangement eliminates the necessity of unsoldering the internal wiring when the telephone set is opened for maintenance, etc.

111.2-b Base. Equipment mounted within the base includes the induction coil, condenser and ringer. The ringer gongs are mounted on the underside of the base and the associated clapper rod is operated by means of a bushing mounted in the base. The wall instrument is equipped with a steel mounting plate for attaching to vertical surfaces. Each instrument is equipped with two 3/4-inch conduit hubs. One hub extends from one end of the base and the other is located on the underside of the base. (The underside hub affords a convenient conduit entrance when it is desirable to panel-mount a wall instrument by bringing the conduit through a panel directly into the instrument.) A threaded plug is furnished with all instruments for sealing the unused hub.

111.2-c Cover. The cover, which bolts onto the base, contains the dial, hook switch and terminal strip. To attain a convenient horizontal position for the handset, the wall instrument has a different type cradle from the desk instrument.

111.2-d Handset. The handset-cord assembly, code #L-9019-AO, has been specially constructed for use in explosive atmospheres. The cord has been sealed in the handset and cannot be replaced in the field.

111.3 **USE:** These telephone sets meet insurance and underwriter's requirements for use at locations where the surrounding atmosphere contains explosive gases or vapor with the exception of Acetylene.

111.3-a These sets are for indoor use and are coded ETDA-20 for desk use and ETWA-20 for wall mounting.

111.3-b When local station zoning indicates zones 1, 2 or 3, these sets may be installed on approval of the Wire Chief's office. Any installation in zone 5 must be approved by the Transmission Engineer.