

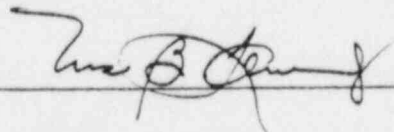
TECHNICAL SPECIFICATION

(OUTLINE SPECIFICATION)

NO. FS-SP-1409

TITLE: ES-2 MUCK LOADING SYSTEM
DIVISION 14 - CONVEYING SYSTEMS
SUBDIVISION - MATERIALS HANDLING SYSTEMS

APPROVED BY



DATE

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PART ONE - GENERAL

1.1 WORK INCLUDED

The Work described in this Section consists of furnishing all materials, equipment, tools, labor, and incidental services to fabricate, deliver and install the Muck Loading System underground in accordance with this Specification and the Contract Drawings, and as otherwise required for proper and timely completion of this Contract.

1.2 REFERENCED PUBLICATIONS

The publications listed below form a part of this specification.

1.2.1 American National Standards Institute (ANSI) Publication:

- o A10.13 Safety Requirements for Steel Erection
- o NQA-1 Quality Assurance Program Requirements for Nuclear
1a - Facilities
Addenda

1.2.2 American Institute of Steel Construction (AISC) Publication:

- o M011 Manual of Steel Construction, Eighth Edition

1.2.3 American Iron and Steel Institute (AISI) Publication:

- o SG-671 Cold-Formed Steel Design Manual Specification for the
Design of Cold-Formed Steel Structural Members:
Part I

1.2.4 American Society for Testing and Materials (ASTM)

- o ASTM A36 Structural Steel
- o ASTM A307 Carbon Steel Externally-Threaded Standard Fasteners.
- o ASTM A325 High-Strength Bolts for Structural Steel Joints
- o ASTM A449 Quenched and Tempered Steel Bolts and Studs

1.2.5 American Welding Society (AWS)

- o AWS D1.1 Structural Welding Code - Steel

1.2.6 Code of Federal Regulations (CFR):

- o 30 CFR 57 Safety and Health Standards- Underground Metal and Non-Metal Miner

1.2.7 California Administrative Code (CAC)

- o Title 8, Chapter and Sub-Chapter 17, Mine Safety Orders
- o Title 8, Chapter and Sub-Chapter 20, Tunnel Safety Orders

1.3 SYSTEM DESCRIPTION

The system will be used for sizing, storing, measuring and loading 10 ton muck hoisting skips, underground. The system will be installed in an excavation made in the rock by others. The system consists of steel bars grizzly, with a maximum 12-inch clear opening, installed on top of a 150-ton steel surge bin which will have an air-operated gate at the bottom. The surge bin is to discharge into a volumetric type measuring flask, with a 10-ton capacity, and having an air-operated gate. The flask will discharge into a fixed chute leading to the skip. An access ladder is to be provided from the bottom of the measuring flask to the top of the surge bin.

1.4 QUALITY ASSURANCE

1.4.1 The Quality Assurance Level Assignment for the ES-2 Muck Loading System is III.

1.4.2 The vendor shall have an approved Quality Assurance program.

PART TWO - PRODUCTS

2.1 MATERIALS

2.1.1 Furnish structural steel in accordance with Contract Documents and requirements specified by AISC and ASTM.

- 2.1.2 High-strength bolts: Furnish bolts complying with requirements specified in ASTM A325.
- 2.1.3 Anchor bolts: Furnish anchor bolts complying with requirements specified in ASTM A36.
- 2.1.4 Other bolts and washers: Furnish carbon steel bolts and washers conforming to requirements specified in ASTM 307.
- 2.1.5 Air-operated cylinders.

2.2 EQUIPMENT

- 2.2.1 All welding equipment shall be in good condition and subject to inspection and approval by the Contracting Officer or his representative.

2.3 FABRICATION

- 2.3.1 Surge Bin: Fabricate and install a 150-ton surge bin, complete with structural steel support, and an air-cylinder operated gate in accordance with Contract Drawings.
- 2.3.2 Grizzly: Fabricate and install steel bars on top of the surge bin with a maximum of 12-inch clear opening in accordance with Contract Drawings.
- 2.3.3 Measuring Flask: Fabricate and install a 10-ton measuring flask, complete with structural steel support below the surge bin, with an air-cylinder operated gate, in accordance with the Contract Drawings.
- 2.3.4 Skip Feed Chute: Fabricate and install a skip feed chute from the measuring flask to the 10-ton skip in Shaft Number 2, in accordance with the Contract Drawings.
- 2.3.5 Access Ladder: Fabricate and install an access ladder from the bottom of the measuring flask to the top of the surge bin, in accordance with the Contract Drawings.

3.0 PART THREE - EXECUTION

3.1 ERECTION/INSTALLATION

Erection of the muck loading system shall be in conformance with standards as outlined in "Referenced Publications".

3.2 MODIFICATIONS

The Contractor may install, add, attach, modify, or delete structural steel members, or mechanical supports to the system only after obtaining proper direction of the Contracting Officer. This includes chutes, bracing, etc.

3.3 STRUCTURE ADJUSTMENT

(Later)

3.4 TOLERANCES

(Later)