WILLIAMS
PATENT CRUSHER and PULVERIZER CO.
TELEX NO 44/7134
OLDEST & LARGEST BUILDERS OF HAMMERMILLS IN THE WORLD
CRUSHERS
GRINDERS
SHREDDERS
CONVEYORS
DRYER MILLS
AIR SEPARATORS
TELEPHONE 314 621-3348
2701 NORTH BROADWAY
ST. LOUIS, MO., U.S.A. 63102

WILLIAMS MODEL 680
REVERSIBLE REFUSE SHREDDER
FOR
CONTI CONSTRUCTION CO.

MONMOUTH COUNTY RECLAMATION FACILITY
TINTON, NEW JERSEY

EQUIPMENT LIST

	SERIAL No.	SHOP ORDER
680 REVERSIBLE REFUSE SHREDDER	18454	870182
MODEL C-1 LUBRICATION UNIT	18455	861705
680 REVERSIBLE REFUSE SHREDDER	18456	870182
MODEL C-1 LUBRICATION UNIT	18457	861705

INSTALLATION,OPERATION,MAINTENANCE,& PARTS LISTS MANUAL

MODEL HTP-1000
TRANSFER PACKER

IMPORTANT

READ THESE INSTRUCTIONS BEFORE OPERATING OR MAINTAINING THIS EQUIPMENT.

KEEP THIS MANUAL FOR FUTURE REFERENCE.

THE HEIL CO.

GENERAL OFFICES: 3000 W. MONTANA ST. MILWAUKEE, WISCONSIN 53201
PHONE: 414–647–3333 CABLE ADDRESS: HEILCO

MANUAL MR72714-875
REPLACES MR72714-375

MANUAL NO. 80-22740 P.O. NO. 28792

ITEM A - APRON CONVEYOR
(TWO REQUIRED - ONE DESCRIBED)

The Apron Conveyor receives material from trucks and is discharged to the Apron Conveyors, Item B.

Conveyor handles solid waste material weighing 15 pounds per cubic foot at a conveyor speed of 15/30 feet per minute with a capacity of 20/70 tons per hour. The conveyor is 78" wide x 63'-0" centers with apron pans bolted to two matched strands of steel bushed chain. Frame is made of structural steel with 8" channel carrying chain track and angle return chain track. Wear bars are provided on all track. Receiving hopper plates are provided full length of the conveyor to seal between the sides of the apron pans and the concrete pit. (See G.A. Drawing No. E-80-22740-3.)

Drive for conveyor is through 15 H.P. two-speed 900/1800 R.P.M. motor connected by a flexible coupling to a worm gear speed reducer. Final drive is through AS 160 x 40' chain, enclosed in guards, and sprockets. Head shaft is 5 7/16" diameter babbitted pillow block bearings. Foot shaft is 3 7/16" diameter set in babbitted take-up bearings with 24" travel. (For take-up adjustment procedure refer to Maintenance and Lubrication heading in front of manual.)

1. MAINTENANCE INSTRUCTIONS, LUBRICATION INSTRUCTIONS.

   a. Refer to heading Maintenance and Lubrication in front of manual.

2. RECOMMENDED SPARE PARTS.

   a. Refer to heading Replacement in front of manual and check all spares listed as ITEM A.

3. MANUFACTURER'S BULLETINS USED ON ITEM A.

   a. Sterling Motors 15 H.P.

   b. Cone-Drive Worm Gear Reducers.

Return Spare as Built = (13' RH, Slow)(26' RH, Fast)

MANUAL NO. 80-22740 P.O. NO. 28792

ITEM B - APRON CONVEYORS
(TWO REQUIRED - ONE DESCRIBED)

The Apron Conveyors receive material from Apron Conveyors, Item A and then discharge the material existing shredders.

Apron Conveyors are inclined and are identical with the exception of length. Conveyor in Building #1 is 78" wide x 68'-0 13/16" centers and conveyor in Building #2 is 78" wide x 64'-0 13/16" centers. Conveyors handle solid waste material weighing 15 lbs. per cubic foot at a speed of 30/60 feet per minute and a capacity of 20/70 tons per hour. Frame is made of structural steel with 8" channel carrying chain track and angle return chain track. Wear bars are provided on all track. Skirt plates, 1/4", are provided full length of conveyor. (See G.A. Drawing No. B-80-22740-8.)

Drive for conveyor is through a 10 H.P., two-speed, 900/1800 R.P.M. motor connected by a flexible coupling to a worm gear speed reducer. Final drive is through AS 140 x 40' chain and sprocket set enclosed in guards. Head shaft is 4 7/16" diameter set in babbitted pillow block bearings. Foot shaft is 3 7/16" diameter set in babbitted take-up bearings with 24" travel. (For take-up adjustment procedures, refer to Maintenance and Lubrication heading in front of manual.)

1. MAINTENANCE INSTRUCTIONS & LUBRICATION INSTRUCTIONS.

   a. Refer to heading Maintenance and Lubrication in front of manual.

2. RECOMMENDED SPARE PARTS.

   a. Refer to heading Replacement in front of manual and check all spares listed as ITEM B.

3. MANUFACTURER'S BULLETINS USED ON ITEM B.

   a. Sterling Motor 10 H.P.

   b. Cone-Drive Worm Gear Reducers.

Acorn Speed as Built: (14' PM, Slow)(28' PM, Fast)

M A N U A L

FENWAL EXPLOSION PROTECTION SYSTEM

NO. 32-195184-00X

TWO (2) FARR CARTRIDGE DUST COLLECTORS

System No. 32-195184-001: Dust Collector No. 1
System No. 32-195184-002: Dust Collector No. 2

MONMOUTH COUNTY RECLAMATION FACILITY
TINTON FALLS, NEW JERSEY

LOCAL REPRESENTATIVE:

WALTER KIDDE SALES & SERVICE
736 FAIRFIELD AVENUE
P. O. BOX 7
KENILWORTH, NJ 07033
TELEPHONE NO. 201-241-2950

Issued: August 25, 1989

By: David Grandaw
DAVID GRANDAW

FENWAL INCORPORATED
Division of Kidde, Inc.
KIDDE

INTRODUCTION

Explosion Protection System No. 32-195184-00X was designed by Fenwal Incorporated, Ashland, Massachusetts, to protect against fires originating in each of two (2) Farr Cartridge Dust Collectors, which handle dust collected from the discharge of two waste shredders. Explosion isolation to prevent combustion flashback down the inlet of each dust collector will be provided by an X-PAC® unit mounted on the inlet duct of each dust collector.

Locations of Fenwal components are shown on the system drawings included with this manual.

Any changes in operation, process material, equipment, re-routed air or material flow, should be discussed with the Fenwal Protection Systems Division prior to putting these changes into effect, as they may compromise the effectiveness of the system.

Bromotrifluoromethane (Halon 1301) is used as the suppressing agent. This agent suppresses deflagrations by inhibiting the chemical reaction of fuel and oxygen. The extinguishing effect due to cooling or dilution of oxygen is minor. High-rate discharge extinguishers, in combination with various sealing and distributing devices, are used for suppression and advance inerting in this system. For description of the characteristics of this agent, please refer to descriptive literature enclosed.

ANNUNCIATION AND CONTROL

Annunciating and control functions are provided by a P/N 30-222000-001 control unit. These functions are described in the Operation Section of the Fire Protection Control Units Manual, enclosed.

All equipment which moves material or air into, through, or out of the protected equipment is interlocked through contacts of the power unit so that the process cannot be operated unless the systems are ready to deal with an incipient explosion. This also assists in preventing restrikes by eliminating the introduction of combustibles into the equipment once a suppression has occurred.

The interlocked equipment is listed on the system drawing.

FIRE & OVERHEAT DETECTION

Fire and overheat detection are provided by DETECT-A-FIRE® Units. These are rate-compensated, thermally-actuated units which will always respond at their fixed temperature setting. The rate compensation feature inherent in these detectors permits them to respond to temperatures below their setting when the rates of temperature increase are high, such as those occurring during a fire condition.

DELTA-PAC® SYSTEM

The purpose of this system is to minimize fire damage to the collector. Sensitive thermocouples are positioned in the inlet and outlet ducts of the collector. They are connected in series so that the output voltage to the control unit is zero whenever the two temperatures are the same. When the outlet temperature increases to a point where it is 10°F above the inlet temperature, an overheat signal is sent to the control unit to shut down the process. The exhaust fan, fire damper, bag cleaning mechanism and discharge airlock are interlocked through contacts of the control unit. The reduction in air flow permits the collector to heat up much more rapidly if an actual fire condition exists. DETECT-A-FIRE® units heat up faster, releasing agent into the process to extinguish the fire while damage is minimal.

Delta Pac® system consists of a control unit and two matched thermocouple probes which are installed as indicated in MC-436.

The detector wiring is supervised so that the process cannot be operated if an open circuit occurs.

SUPPRESSION

Suppression and advance inerting are accomplished by high-rate discharge extinguishers of various sizes discharging suppressing agent through spreaders into the protected portions of equipment.

The maximum ambient temperatures to which these extinguishers may be exposed is 130°F (54°C). Sealing devices and piping generally provide sufficient shielding and cooling to limit extinguisher temperatures even at high process temperatures. If process operation or environment is such that the temperatures might exceed 130°F (54°C), the user must provide auxiliary cooling devices.

INSPECTION & CLEANING

Inspection and cleaning of the equipment adaptors must be performed periodically until a fixed schedule is established which will insure that the system will perform properly. Adaptors for extinguishers should be inspected to insure that the agent flow through them will not be restricted; blowout stoppers, spreader caps and other sealing devices, when extinguishers are equipped with these as accessories, must be in place to prevent material accumulation.

All fittings removed for cleaning must be properly replaced following the cleaning operation.

CAUTION - DETECTOR - MAINTENANCE

Care must be taken to ensure that the shells of DETECT-A-FIRE® Units are not damaged in any way.

INSPECTION & SERVICE

A complete inspection of the system and its components by QUALIFIED personnel must be performed every three months per NFPA No. 69 and per Fenwal specifications. Explosive actuators should be replaced annually, at a time that qualified personnel are performing a complete inspection.

Whenever Fenwal components are replaced or any system re-wiring is performed, system integrity can be ensured ONLY if these changes are inspected by QUALIFIED personnel prior to start-up of the operating equipment.

PROCEDURES WHICH MUST BE OBSERVED FOLLOWING SYSTEM ACTUATION

1. *Shut down the system at the power unit.*

2. *For systems utilizing a halogenated hydrocarbon as the suppression agent, operating equipment must be purged before permitting access by personnel, or personnel must wear air packs or other auxiliary breathing devices. Eye protection must be worn at all times.*

   The halogenated hydrocarbons generally utilized for suppressants are Halon 1011 (bromochloromethane - CH_2BrCl), Halon 1301 (bromotrifluoromethane -

$CBrF_3$), or Halon 2402 (dibromotetrafluoroethane-$CBrF_2CBrF_2$). Concentrations normally used for suppression are toxic.

3. The cause of system actuation must be determined, if possible, and corrective action taken to prevent recurrence. If the cause of actuation has not been positively ascertained, the product material should remain in the equipment until an investigation by qualified personnel can be conducted, or it should be identified as to each piece of equipment from which it was removed and saved for examination.

Actuations should be promptly reported to the Fenwal Field Engineering Group (Telephone: (508) 881-2000) or to the local authorized distributor or representative for determination of further action to be taken prior to removal of product and re-conditioning or replacement of system components.

SPARE PARTS

In order to insure a minimum of downtime if an actuation occurs, the spare parts recommended on the system drawing should be stocked at the customer's facility.

Explosive devices must be handled and stored in accordance with the local regulations governing Class "C" explosives. It is recommended that a complete stock of these be maintained, as they must be replaced annually.

Enough components should be kept on hand to recondition any one system. If extinguishers are to be reconditioned at the site, a quantity of Reconditioning Kits equal to the number of HRD extinguishers in the system should be stocked.

High-rate discharge extinguishers may be reconditioned at the site, provided the Reconditioning Kits, agent, and apparatus described in Publication 256, enclosed, are on hand.

Please contact your local authorized Fenwal representative or distributor for extinguishing agent, spare parts and reconditioning information, as required.

ENCLOSURES:

1) *System Drawing 32-195184-001, 32-195184-002*
2) *Manual MC-436*
3) *Manual MC-319E*
4) *Publication 256*
5) *Suppressing Agent Literature (Halon 1301)*
6) *Data Sheet DS 30-2200.0*