

PROCEDURES FOR RECONDITIONING/DISPOSAL OF OPEN HEAD STEEL DRUMS

DRUM PICK-UPS

DRUMS THAT ARE PICKED UP ARE CERTIFIED THAT THEY ARE EMPTY AND MEET ALL D.O.T. AND EPA REGULATIONS PERTAINING TO EMPTY STEEL DRUMS.

DRUM UNLOADING

DRUMS ARE UNLOADED FROM TRAILERS BACKED UP TO THE DOCK ON THE RECEIVING END OF THE DRUM BURNER, (LOCATED NORTH OF MAIN BUILDING). AT THAT TIME THEY ARE GRADED BY TYPE OF DRUM, CONDITION OF DRUM AND QUANTITY OF PRODUCT LEFT IN THE DRUM FROM OUR CUSTOMER (EPA REGULATED). CUSTOMER IS NOTIFIED IF DRUM CONTAINS EXCESSIVE RESIDUE.

RINGS THAT HOLD THE COVER ON THE DRUM ARE REMOVED FOR A SEPARATE OPERATION.

DRUMS ARE THEN LOADED ONTO A CHAIN CONVEYOR LOCATED ON THE OPEN HEAD RECEIVING PLATFORM, THAT LEADS TO THE PRIMARY CHAMBER OF THE DRUM BURNER.

DRUM BURNING

DRUMS (55, 30 AND 85 GALLON) ARE SENT THROUGH THE DRUM BURNER BY POWER CONVEYOR AND DIRECT FIRED AT NO LESS THEN 1,000 DEGREES FAHRENHEIT.

INSPECTION

ALL DRUMS ARE INSPECTED FOR 100 PERCENT OF DRUM RESIDUE REMOVAL.

IF A DRUM IS FOUND UNSUITABLE FOR RECONDITIONING IT IS CRUSHED AND PROPERLY DISPOSED OF.

PLUGS (BUNGS) ARE REMOVED AT THIS TIME FOR A SEPARATE CLEANING OPERATION.

THE DRUMS AND LIDS ARE THEN CONVEYED TO THE PLANTS FIRST OPERATION BY OVER HEAD CONVEYOR SYSTEM.

DRUM BLASTING

DRUMS ARE STEEL SHOT BLASTED (S-170 SHOT) USING 250 HORSE POWER TO TO INSURE A 100 PERCENT CLEAN SURFACE ON THE INSIDE AND OUTSIDE OF THE DRUM.

DRUM STRAIGHTENING

DRUMS ARE STRAIGHTENED TO REMOVE DENTS AND RE-ALIGN ROLLING HOOPS ON THE DRUM.

CHIMES ARE STRAIGHTENED AND PRESSURE SEALED.

HEAVY DENTS ARE ROLLED OUT TO CONFORM TO DRUM SPECIFICATIONS.

DRUM TESTING

DRUMS ARE TOTALLY SUBMERGED IN WATER AND VISUALLY INSPECTED UNDER 10 POUNDS OF CLEAN DRY AIR PRESSURE, CHECKING FOR ANY LEAKS IN THE BODY, SEAM, PLUG OR CHIME.

DRUM WASHER

DRUMS ARE RINSED OUT TO REMOVE (IF ANY) DUST CREATED IN THE STEEL SHOT BLASTING OPERATION, THEN THEY ARE CLEANED WITH CLEAN FILTERED WATER.

THE SECOND STAGE OF THIS WASH OPERATION CONSISTS OF APPLYING A RUST INHIBITOR TO THE SURFACE OF THE DRUM TO INSURE A MINIMAL OXIDATION PERIOD TO THE SURFACE OF THE STEEL.

DRUM DRYING

THE DRUM IS HEATED TO INSURE THAT ALL MOISTURE HAS BEEN REMOVED FROM THE CHIME AND BUNG INSERT ALONG WITH DRYING THE SURFACE OF THE DRUM.

DRUM COOLING

THE DRUM IS COOLED TO THE PROPER TEMPERATURE FOR THE NEXT OPERATION.

DRUM LINING

DRUMS ENTER THE FILTERED ENCLOSED LINING BOOTH AND AUTOMATICALLY RECEIVES A PRE-SET METERED AMOUNT OF LINER (.8 TO 1 MIL). OUR SPRAY SYSTEM UTILIZES THE NEWEST HVLP TECHNOLOGY AVAILABLE TO ASSURE OUR COATINGS TO BE EVENLY APPLIED AND FREE OF BLEMISHES, BLISTERS, ETC.

DRUM INTERIOR BAKING

THE INTERIOR LINING OF THE DRUM IS CURED IN A CONTROLLED ATMOSPHERE FROM 350 DEGREES FAHRENHEIT TO 450 DEGREES FAHRENHEIT (DEPENDING ON THE TYPE OF LINER) FOR 15 MINUTES, CONSISTING OF 3 MINUTES OF PRE-HEAT, 10 MINUTES OF ACTUAL BAKE AND 2 MINUTES OF OVEN COOL DOWN BEFORE EXITING OUR 100 FT. BAKE OVEN.

DRUM EXTERIOR PAINT

THE DRUM EXTERIOR IS PAINTED USING THE AIR-LESS SYSTEM, 2000 TO 3000 POUNDS, UTILIZING 8 TO 10 BINKS AIR-LESS RACK MOUNTED SPRAY GUNS TO ASSURE A EVEN CONTROLLED COATING ON THE RESTORED SURFACE.

DRUM EXTERIOR BAKING

THE EXTERIOR OF THE STEEL DRUM IS THEN BAKED IN A CONTROLLED ATMOSPHERE OF 350 DEGREES FAHRENHEIT FOR 10 MINUTES, CONSISTING OF 3 MINUTES OF PRE-HEAT, 5 MINUTES OF ACTUAL BAKE AND 2 MINUTES OF OVEN COOL DOWN BEFORE EXITING OUR 100 FT. BAKE OVEN.

DRUM INSPECTION

THE DRUM INTERIOR IS INSPECTED FOR MIL THICKNESS AND BUBBLES IN THE LINING. THE EXTERIOR IS INSPECTED FOR MIL THICKNESS AND COVERAGE OF THE PAINT. IF A DRUM DOES NOT MEET THIS INSPECTION IT IS SENT BACK TO THE BURNER TO BE REPROCESSED.

DRUM ASSEMBLY

THE COVER IS INSPECTED AND PLACED ON THE DRUM, GASKETS ARE INSTALLED AND RINGS INSTALLED, TIGHTENED AND SEALED IF REQUESTED BY THE CUSTOMER.

DRUM LOADING

THE FINAL PROCEDURE IS THE LOADING OF THE DRUMS ONTO TRAILERS THAT HAVE BEEN CLEANED, SWEEPED AND INSPECTED BY OUR FULL TIME, ON SITE, TRAILER TECHNICIAN. HE MAKES SURE THAT THE TRAILERS ARE SUITABLE FOR THE ROAD AND MEET ALL D.O.T. REGULATIONS.

MEYER STEEL DRUM, INC.
3201 S. MILLARD STREET
CHICAGO, IL 60623

PROCEDURES FOR RECONDITIONING/DISPOAL OF TIGHT HEAD STEEL DRUMS

DRUM PICK-UPS

DRUMS THAT ARE PICKED UP ARE CERTIFIED THAT THEY ARE EMPTY AND MEET ALL D.O.T. AND EPA REGULATIONS PERTAINING TO EMPTY STEEL DRUMS.

DRUM UNLOADING

DRUMS ARE UNLOADED FROM TRAILERS BACKED UP TO THE DOCK ON THE RECEIVING END OF THE TIGHT HEAD RECEIVING DOCK (LOCATED ON THE WEST END OF THE BUILDING). AT THAT TIME THEY ARE GRADED BY TYPE OF DRUM CONDITION OF DRUM AND QUANTITY OF PRODUCT LEFT IN THE DRUM FROM OUR CUSTOMER (EPA REGULATED). THE CUSTOME IS NOTIFIED IF DRUM CONTAINS EXCESSIVE RESIDUE.

PLUGS AND/OR BUNGS ARE REMOVED FOR A SEPARATE OPERATION BEFORE PROCESSING BEGINS. A LABEL REMOVER SOLUTION IS APPLIED TO THE DRUM TO ASSIST IN THE REMOVAL OF THE LABEL.

DRUMS ARE THEN LOADED ONTO A CHAIN CONVEYOR THAT BRINGS THE DRUMS TO 1 OF 2 OPERATIONS.

OPERATION 1

OIL DRUMS ARE CONVEYED THROUGH A STEAM HEATED OVEN TO RAISE THE TEMPERATURE OF THE DRUM TO ALLOW EASY REMOVAL OF OIL (IF ANY) CLINGING TO THE WALLS OF THE DRUM. THE MATERIAL (IF ANY) IS THEN REMOVED BY VACUUM LINES THAT GO TO THE VERY BOTTOM OF THE DRUM. THE RESIDUALS ARE STORED IN SEALED TANKS FOR REMOVAL BY A LICENSED CERTIFIED HAULER. THE DRUM THEN GOES TO A PREWASHING STAGE WHERE THE BULK OF THE CONTENTS ARE REMOVED BY HI PRESSURE SPRAYERS AND A HOT (200 F) CAUSTIC SOLUTION.

OPERATION 2

ANY OTHER DRUMS CONTAINING ANY OTHER SUBSTANCE SUCH AS PAINT OR FOOD PRODUCTS ARE BROUGHT TO A WASHING STATION WHERE THEY ARE PREWASHED REMOVING THE BULK OF THE CONTENTS BY HI PRESSURE SPRAYERS AND A HOT (200 F) CAUSTIC SOLUTION.

EXTERIOR WASHER

ALL DRUMS RECEIVE A HOT (200 F) CAUSTIC SOLUTION FULL BODY WASH AND THEN A CLEAR WATER RINSE.

DOUBLE ENDED CHIMING

ALL DRUMS ARE DOUBLE ENDED CHIMED. THIS PROCESS TIGHTENS UP BOTH ENDS OF THE DRUM TO ASSURE A SEALED TIGHT CONTAINER.

AUTOMATIC DEDENTING

ALL DRUMS GO THROUGH A HI SPEED AUTOMATIC DRUM DEDENTER THAT IF FILLED WITH CLEAN DRY AIR (APROX. 40 POUNDS) AND THEN ROLLED WITH LARGE STEEL ROLLERS.

INSPECTION

THE STEAM IN THE DRUM (FROM THE DEDENTING PROCESS) IS THEN REMOVED AND THE DRUM IS INSPECTED FOR RUST AND DENTS. IF THE DRUM IS STILL DENTED IT GOES THROUGH THE ENTIRE PROCESS AGAIN. IF THE DRUM IS SLIGHTLY RUSTED IN THE INTERIOR OF THE DRUM IT GOES THROUGH A SPECIAL HI CAUSTIC WASHING PROCESS. IF HEAVILY RUSTED IT GOES TO OUR CHAINING PROCESS WHERE WE USE SPECIAL CHEMICALS ALONG WITH STEEL CHAINS THAT ARE ESPECIALLY DESIGNED TO DESCALE THE SURFACE OF THE METAL LEAVING THE SURFACE FREE OF RUST. THE DRUM IS THEN RETURNED TO THE BEGINNING OF THE CLEANING PROCESS.

DRUM FLUSHER

ALL DRUMS FROM THE PREWASH PROCESS ARE THEN PROCESSED THROUGH OUR AUTOMATIC 12 STAGE DRUM FLUSHER, EACH DRUM GOES THROUGH EIGHT (8) STAGES OF HOT CAUSTIC WASHING WASHING SOLUTION THEN THREE (3) STAGES OF CLEAR WATER RINSE AND ONE (1) STAGE OF RUST INHIBITER.

DRUM TESTING

ALL DRUMS ARE TESTED ACCORDING TO U.N. REQUIREMENTS USING NO LESS THAN 7 PSI. USING CLEAN DRY COMPRESSED AIR THESE DRUMS ARE SUBMERGED INTO A VAT OF WATER AND A VISUAL INSPECTION IS MADE FOR HOLES IN THE BODY, TOP AND BOTTOM OF THE DRUM.

DRUM DRYER

THE DRUM IS DRIED INTERNALLY AND EXTERNALLY BY OUR OPEN FLAME DRYER. THIS DRYER IS DESIGNED TO DRY THE ENTIRE DRUM, PAYING SPECIAL ATTENTION TO THE INNER SEAMS OF THE DRUM.

LABEL REMOVAL

AFTER THE DRUM IS COMPLETELY DRIED THEN ANY REMAINING LABEL RESIDUE IS REMOVED BY SCRAPPING.

INSPECTION

AFTER THE DRUM IS EVACUATED OF STEAM GENERATED BY THE DRYING PROCESS IT IS AGAIN INSPECTED INTERNALLY.

DRUM COOLING

THE DRUM IS COOLED PRIOR TO BLASTING TO ELIMINATE PRESSURE THAT MIGHT HAVE BUILT UP IN THE DRUM DURING THE DRYING PROCESS.

DRUM BLASTING

DRUMS ARE THEN SENT THROUGH OUR SPECIALLY DESIGNED TIGHT HEAD STEEL SHOT DRUM BLASTER TO SCALE OFF ALL RESIDUE THAT MIGHT BE LEFT ON THE SURFACE OF THE DRUM. THE SHOT WILL ASSURE A CLEAN SMOOTH SURFACE SO THAT THE DRUM CAN GO TO THE PAINT PROCESS.

INSPECTION

AGAIN THE DRUM IS INSPECTED FOR DENTS, COMPLETE LABEL REMOVAL, SHOT IN OR ON THE DRUM AND ALL AROUND GENERAL APPEARANCE.

DRUM LINING

DRUMS ENTER THE FILTERED ENCLOSED LINING BOOTH AND AUTOMATICALLY RECEIVES A PRE-SET METERED AMOUNT OF LINER. (.8 TO 1 MIL). OUR SPRAY SYSTEM UTILIZES THE NEWEST HVLP TECHNOLOGY AVAILABLE TO ASSURE OUR COATINGS TO BE EVENLY APPLIED AND FREE OF BLEMISHES, BLISTERS, ETC.

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DRUM ASSEMBLY

DRUMS ARE INSPECTED AND ALL PROPER MARKINGS ARE PUT ON THE DRUM AT THIS TIME, ALSO BUNGS ARE TIGHTENED AND SEALED IF REQUESTED BY THE CUSTOMER.

DRUM LOADING

THE FINAL PROCEDURE IS THE LOADING OF THE DRUMS ONTO TRAILERS THAT HAVE BEEN CLEANED, SWEEPED AND INSPECTED BY OUR FULL TIME, ON SITE TRAILER TECHNICIAN. HE MAKES SURE THAT THE TRAILERS ARE SUITABLE FOR THE ROAD AND MEET ALL D.O.T. REGULATIONS.