

AR P001025
18-00565

AG
BIOAS

ADEQ BASELINE MONITORING REPORT [BMR] (for Metal Finishers under 40 CFR 433)

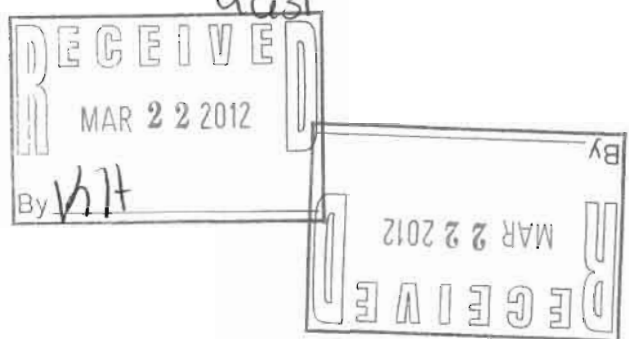
Instructions: In accordance with 40CFR403.12(b) Industrial Users subject to categorical Pretreatment Standards are required to submit to ADEQ a report which contains the information in paragraphs (b)(1)-(7). The User is responsible for submitting a complete and accurate report. The User must complete this form in as much detail as possible. Include additional information on attached sheets as necessary where space is limited.

(1) Facility Identifying Information [**§403.12(b)(1)**]:

A. Legal Name: Hino Motor Manufacturing USA LLC
 Mailing Address: 100 Hino Blvd
 Marion, Arkansas 72364

B. Facility Name: Hino Motor Manufacturing USA LLC
 Location: 100 Hino Blvd
 Marion, Arkansas 72364

C. Name of Owners: Hino Motor Manufacturing USA LLC
 Address: 100 Hino Blvd
 Marion, Arkansas 72364



D. Name of Pretreatment System Operators: _____ Class: _____
 _____ Class: _____
 _____ Class: _____

E. Facility Signatory Authority / Title: Kevin Ohneck / VP / Plant Ma

F. Main wastewater compliance contact / Title: Jerry McPherson / Manager of EHS
 Phone number: 870-702-3037 Cell #: 870-635-1367
 e-mail address: jmcpherson@hmmusa.com

G. Number of Employees: 336 Number of Shifts: 2

H. Number of Months per Calendar Year which Plant normally operates: 12

I. Name of the City [Publicly Owned Treatment Works (POTW)] that receives the wastewater discharges from this facility. If this facility has other wastewater not connected to a sewerage system describe where that wastewater is discharged):
City of Marion
Marion, Arkansas

J. Provide the date the facility began discharging regulated wastewater to the POTW: October 2, 2006

Date facility installed/commenced construction of the Metal Finishing operation(s): June 2006

(2) User's Permits [§403.12(b)(2)]:

Describe all environmental control permits held by or for the facility:

Describe Title of the Permit	Permit No.	Issuing Office or Agency	Exp. Date
Air Permit	2070-AR-06 AFIN-18-00565	ADEQ	N/A
Storm Water	ARR-151404 AFIN: 18-00565	ADEQ	Dec 2012
Hazardous Waste	ARR000017565	EPA ADEQ	N/A

(3) Description of Operations [§403.12(b)(3)]:

A. List Basis Metals Used: **SPH 590 Grade Steel (please review make up of steel)**

B. List Chemicals (attach first page of their MSDS if necessary [not trade names]) used in regulated process(es) (solvents, acids, caustics, aqueous cleaners, machining oils/lubricants/coolants, etc.) and their use/at what station:

Please reviewed attached MSDS on all : *placed in site. ED-Cost (live chems only)*
AB

C. Provide a Comprehensive Narrative Description of the facility's wastewater activities/processes or other activities conducted and the Final Products (attach a separate sheet if necessary):

Please review attachments

See Section E. below. A, B & C above can be submitted on separate sheets of paper. These do not have to be to-scale and can be hand drawn, preferably with a separate (numbered) legend for separate process/pretreatment tanks, etc. This numbered legend page can then describe what chemicals and process is being performed without further complicating the schematic.

D. Summarize each Point Source Category Core Process generating wastewater (Electroplating, Electroless Plating, Anodizing, Coating [chromating, phosphating, and coloring], Chemical Etching and Milling, and Printed Circuit Board Manufacture) See 40 CFR 433 @ http://www.access.gpo.gov/nara/cfr/waisidx_05/40cfr433_05.html for applicability):

<u>Core Operation(s)</u>	Pretreatment Standard Category – 40 CFR 433.17	SIC Code(s)	NAICS Code(s)
<i>2</i>			
<i>7</i>			

List any of the forty (40) "ancillary" operations generating wastewater (see 40 CFR 433.10 @ http://www.access.gpo.gov/nara/cfr/waisidx_05/40cfr433_05.html for these which are also regulated under 40 CFR 433)

2	
1	

E. Provide on separate sheets (if necessary):

- (i) A comprehensive schematic of manufactured parts flow through each regulated process that generates Federally regulated wastewater. These are preferably to be not-to-scale and on 8.5”X11” sheets of paper and can be hand drawn if CAD is not available.
- (ii) A comprehensive schematic drawing showing all wastewater directional flows (regulated and unregulated), location of pretreatment system, sampling locations and flows for each individual wastestream. Show points of discharge to the POTW from regulated processes and sampling point. These do not have to to-scale and can be hand drawn if CAD is not available. Several 8.5” X 11” sheets are preferable to one large facility layout.
- (iii) Denote any Pollution Prevention (P2) practices such as flowlines showing in-situ filtration, counter-current flows, air knives, wet scrubber return water to baths, acid/caustic baths regeneration, etc.
- (iv) Denote chemical storage areas (bulk storage, at workstations, outdoor, etc.)
- (v) Denote any floor drains and containment areas (curbs, secondary containment, below grade grated troughs pumped/gravity-flowed to pretreatment, etc).
- (vi) In lieu of Total Toxic Organic (TTO) monitoring, a Toxic Organic Management Plan (TOMP) may be submitted. Once approved by ADEQ, the following certification statement may be made: “Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to ADEQ.”

(4) Flow Measurement [§403.12(b)(4)]:

A. Total Plant Flow in Gallons per Day (gpd):

Average 6,044 Maximum 10,434

{denote all the flows below if measured [M] or estimated [E]}

B. Individual Flows in Gallons per Day ¹ (gpd); <u>Discharge</u> wastestreams include non-contact cooling water, sanitary waste, boiler blowdown, etc.	Average Flow Rate ² (gpd)	Max. Flow Rate (gpd)	Type Discharge ² and at what frequency (describe)	Discharged to City, hauled off-site or recycled (describe)

Regulated Streams				
Waste Water Treatment	6,044	10,434	Continuous	Discharged to City of Marion
Unregulated Streams				
Dilute Streams ³				
Non-Contact Cooling Water				
Boiler Blowdown				
Sanitary Wastewater	2 1			
De-I or R/O backwash				

¹Referring to 40 CFR403.6(e)(1) average flows must be for a 30-day period unless batch discharges are less frequent than monthly.

²Do not normalize over a period of days if batch discharged; state measured amount per batch and at what frequency). Show type - Continuous, Batch (Monthly, Semi-annually, 1 per 3 months, 5 days/week, 25 days/30-day period, etc.)

³Denote whether any of these streams are combined to the regulated wastestream prior to pretreatment OR prior to the final sampling point. If any of these flows are combined with the regulated wastestream as alluded to above, the MAC and AAC values in Section (5)C. below will have to be calculated.

(5) Measurement of Pollutants in User's Discharge to POTW [§ 403.12(b)(5)]:

A. (i) Cite Evidence why the process wastewater is subject to 40 CFR 433:

Core Process: _____
 Core Process: _____
 Core Process: _____

(ii) Provide on a separate sheet a comprehensive schematic of all wastewater pretreatment equipment (holding tanks, mixing tanks, chemical injection points, clarifier, sludge holding tank, sludge press/supernatant, flow lines, etc) and wastewater flows direction. Show treatment system location in relation to process flows and sampling points on schematic drawing required in Section 3.E.(ii) above.

B. Analysis of Regulated Flows: The industrial user must perform sampling and analysis of the effluent from all regulated processes which discharge into the POTW (after pretreatment). Provide the analytical data for the regulated processes in the appropriate space below. If facility's Metal Finishing regulated flow is the only flow that is sampled, the below limits apply.

CONCENTRATION (mg/l)									
40 CFR 433.17 Limits	Pollutant								
	Cd	Cr	Cu	Pb	Ni	Ag	Zn	CN	TTO**
Maximum daily	0.11	2.77	3.38	0.69	3.98	0.43	2.61	1.20	2.13
Monthly Average* not to exceed	0.07	1.71	2.07	0.43	2.38	0.24	1.48	0.65	---

* Regardless of samples taken/analyzed, these limits must be met at a minimum.

** See http://edocket.access.gpo.gov/cfr_2005/jul/qtr/pdf/40cfr433.11.pdf for list of Toxic Organics.

C. Analysis of Total Plant Flow (Mark each blank "N/A" if not appropriate/applicable)

In accordance with 40 CFR 403.6(e) an industrial user may sample and analyze the total plant flow and calculate an alternate concentration limit using the combined wastestream formula if regulated process flows are mixed with other flows prior to treatment and/or sampling. Record the analytical results for all regulated pollutants below. Record the calculated concentration limits as well as the actual measured concentrations.

CONCENTRATION (mg/l)									
	Pollutant								
	Cd	Cr	Cu	Pb	Ni	Ag	Zn	CN	TTO
MAC ¹	--	--	--	--	--	--	--	--	--
AAC ²	--	--	--	--	--	--	--	--	--
AMMC ³									
AMAC ⁴									

- 1 MAC --- Maximum Alternate Concentration as determined by ADEQ. *[If facility's Metal Finishing sampled flow is diluted with sanitary wastewater,*
- 2 AAC --- Average Alternate Concentration as determined by ADEQ. *boiler blowdown or non-contact cooling water, these numbers will have to be calculated per the Combined Wastestream Formula (CWF) in 40 CFR 403.6.]*
- 3 AMMC --- Actual Measured Maximum Concentration from Lab results. *[Facility's results must include the (ADEQ certified) lab's results & QA sheet*
- 4 AMAC --- Actual Measured Average Concentration from Lab results. *along with a complete chain of custody]*

D. User Sample Location*: **Discharge Tank to City of Marion**

*This location should be identified on the wastewater flow schematic required in Section 3.E.(ii) above. }

Sample Type (Composite samples are required except where not feasible or where grab samples are specifically required)

Grab Sample

Number of Samples Taken: _____ Frequency (Daily, Weekly, etc) _____

Analytical Methods Used (Must be in accordance with 40CFR136--for example: Meth. 200.7, 624, 625, etc.) _____

(6) Certifications [§403.12(b)(5)(viii) & 403.12(b)(6)]:

40 CFR 403.12(b)(6) Compliance Certification

A. Are applicable categorical pretreatment standards being met on a consistent basis? YES NO

B. If no, do you require:

(i) Additional operation and maintenance (O&M) to achieve compliance? YES ___ NO ___

(ii) New or additional pretreatment facilities to achieve compliance? YES ___ NO ___

40 CFR 403.12(b)(5)(viii) Representative Certification

I certify, to the best of my knowledge, that the sampling and analysis as shown in Section 5 above is representative of the User's normal work cycles and the expected Discharges to the POTW.

Print Name: _____ Signature: _____ Date: _____

In accordance with 40CFR403.12(b)(5)(viii) & (6) a qualified professional must complete and sign these certifications in the space below.

Name & Title _____
Qualified Professional (Please Type or Print)

Signature _____

Date _____

(7) A. If additional O&M or new or additional pretreatment will be required to meet categorical pretreatment standards on a consistent basis, provide an explanation in an attachment. New sources must not commence discharge until compliance is possible.

B. Signatory Requirement [40 CFR 403.12(l)]

40 CFR 403.12(l)(3) Authorization to Sign Environmental Reports

I hereby authorize persons filling the position title of _____, responsible for the overall operation of the _____, Arkansas, to sign all regular reports required by National Pretreatment Standards--pursuant to ADEQ rules and/or Clean Water Act (CWA) regulations. This written authorization is provided in accordance with 40 CFR 403.12(l) and comparable state regulations.

Corporate official name & title here

Signature

Date

40 CFR 403.6(a)(2)(ii) Certification

I certify under penalty of law that I have personally examined and am familiar with the information in this Baseline Monitoring Report and all attachments, and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the report, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name of Authorized Representative (Please Type or Print)

Official Title (Please Type or Print)

Signature

Date

TTO Certification Statement

(As mentioned in Section 3.E.(vi) above, the facility may submit a Toxic Organic Management Plan (TOMP) to ADEQ and receive TOMP approval before the waiver of TTO monitoring can be granted and the below certification statement can be made. EPA Guidance material can be found at <http://www.epa.gov/npdes/pubs/owm0021.pdf> for an acceptable TOMP)

``Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to ADEQ."

Name of Authorized Representative (Please Type or Print)

Official Title (Please Type or Print)

Signature

Date

Summary of Activity

Hino Motors Manufacturing U.S.A., Inc (Hino) operates an auto parts production facility located in Marion, Arkansas. ~~The predominant emission from the facility is VOC emissions resulting from various coatings applications at 52.2 tpy. Other emissions include particulate (PM/PM₁₀) emissions from grinding and welding operations, various emissions resulting from natural gas combustion at the coating dryers, and HAP emissions resulting mostly from the coating applications.~~

Process Description

The scheduled manufacturing operating time and production to meet the annual production goals is two (2) eight-hour (8-hour) shifts, five (5) days per week. within a shift, the production operating time is 7.75 hours. This design production basis establishes the average hourly production and materials consumption rates for this application. For periods to catch up on production or to meet client demand shortfalls, it may be necessary to operate three (3) shifts per day and six (6) days per week. The potential 100% capacity operating time is considered to be the equivalent of 24 hours per day, 365 days per year or 8,760 hour per year.

There are no limits on annual hours of operation.

Truck Parts Electro Deposition Coating Line

Miscellaneous truck axle parts fabricated will be cleaned, surface treated and painted in an Electro Deposition Coating (ED Coating) line. The degreasing and pretreatment operations utilize aqueous dip and rinse tanks with degreasers, surface conditioner, zinc phosphate treatment and inorganic toner solutions. ~~There are no regulated emissions from these process steps. They are listed collectively in the insignificant activities list as Degreasing Operations.~~ The Electro Deposition Coating (painting) uses a two-component water borne coating of pigments and resin diluted with water in the coating dip tank. After ED coating and rinse, the parts are carried by conveyor into the ED Oven to bake and cure the paints. ~~The entrance and exit of the oven have exhaust hoods to exhaust escaping oven gases, heat, and VOCs evaporating outside of the oven through two stacks. Because the oven is heated both directly and/ or indirectly it is in determinate.~~

~~what emissions vent through which of the three stacks. The emissions from the three stacks are bubbled as one source.~~

Machining and Weld line Processes

The facility manufacture rear differentials, front and rear axles and suspension parts (upper and lower, front and rear knuckle arms). The factory floor will have multiple lines and stations for machining, welding, treating, cleaning and assembly of the parts. ~~Only the Welding Activities have any quantifiable emissions.~~ Machining of front and rear knuckle parts is carried out in enclosed grinding machines using water with soluble cutting/additives. Manufacture of a knuckle can involve machining, preparation, welding and assembly of about fifteen (15) different parts that go into a knuckle assembly. All welding stations are closed or hooded and connected to the welding exhaust system. The rear axle shaft process involves machining and heat treating. Enclosed machining prevents cutting solution mist that might be generated in the machine from being released into the work room. The heat treating operation is electric high frequency treating and quench ~~with no emission release.~~

The differential case lines involve enclosed machining. One line includes electric heat treating. The differential case and parts come together at the differential assembly line. Parts washed in the several aqueous washing machines are air dried after the hot water wash. There are three (3) rear axle housing lines involving machining and arc welding activities. The axle fabrication involves welding together the steel upper and lower halves of the housing and the attached parts and performing necessary machining of surfaces. The rear axle housing, shaft and differential come together in the rear axle assembly station. The axle painting activity is in this area. The welding activities carried out on the rear axle housing and the upper and lower, front and rear suspension arms ~~are the only source of quantifiable emissions from these truck parts fabrication areas.~~ All welding stations are in exhausted cabinets or utilize hoods connected to the plant welding exhaust system. This exhaust system fan located outside the southwest corner of the building to exhaust all of the welding stations in the plant. Welding uses gas metal arc welding wire with carbon dioxide and argon shielding gases.

Rear Axle Paint Line

After assembly of the rear axle housing, shafts, differential and other components, the assembled rear axle is prepared for painting on a conveyORIZED Axle Coating Line, and painted in two booths. For painting, the axles are hung on an overhead conveyor line to pass through the spray coating booths and the gas fired curing oven. All axles are painted using only one (1) black, waterborne coating. Paint application will be performed in two (2) cross-flow booths in series; where opposite sides of the axle will be sprayed with electrostatic air assisted spray guns. The booths will be custom built with replaceable outlet air filters to control overspray particulate emissions. A waterborne, low-VOC and low-HAP is used. This is a mixture of water dispersion epoxy resin, pigments, additives and solvents. Total solvent content is typically less than 10% by weight basis. From the paint booths, the axles pass into one of the gas fired Axle Coating Curing Ovens. The Curing Ovens uses a low-NO* natural gas burner with a nominal heat input capacity of 2.0 MMBtu/hr, while the Oven uses a natural gas burner with a nominal heat input capacity of 2.45 MMBtu/hr. To adequately cure the high boiling temperature solvents used in contemporary low solvent coatings, the oven operates at a relatively high temperature with an outlet exhaust temperature in the 250 to 300 degrees F range. The paint line and curing oven will be custom built for the Hino axle plant. Additional exhaust may include a flash zone between the spray booths and oven and an oven conveyor exit exhaust hood to remove heat. Addition of these features will have no impact on emissions.

Utilities

The axle plant will use natural gas for comfort heating in make-up air units, gas fired unit heaters at doors and other locations around the inside periphery of the building and in some of the rooftop air conditioning units. These are Group B insignificant activities.

Press Plant

The Press Plant produces suspension parts for pickup trucks and SuVs assembled elsewhere by others. The facility will receive coiled steel sheet and perform pressing to produce customer truck parts. The material (coiled steel sheet) used for the press is carried into the factory by tractor trailer and placed on a set area by overhead crane or forklift. The coiled material is next set in the blanking line by the overhead traveling crane and cut into sizes for the parts. The cut parts are piled on a special pallet stored in set

place by the forklift. The parts for pressing are set at the head of the feeder of the pressing line by the forklift or the hoist crane and pressed automatically. Pressed parts are taken out one by one with the feed controlling device (transfer device), set in the following metal mold, and pressed again. The completed parts are put on the conveyer with the transfer device after taking out of the final metal mold, transported outside the line, and dropped into a special box (pallet). The completed parts in the box are carried to the set area by the forklift. After that, the completed parts are picked up by the worker in the following process with the forklift if necessary for shipping.

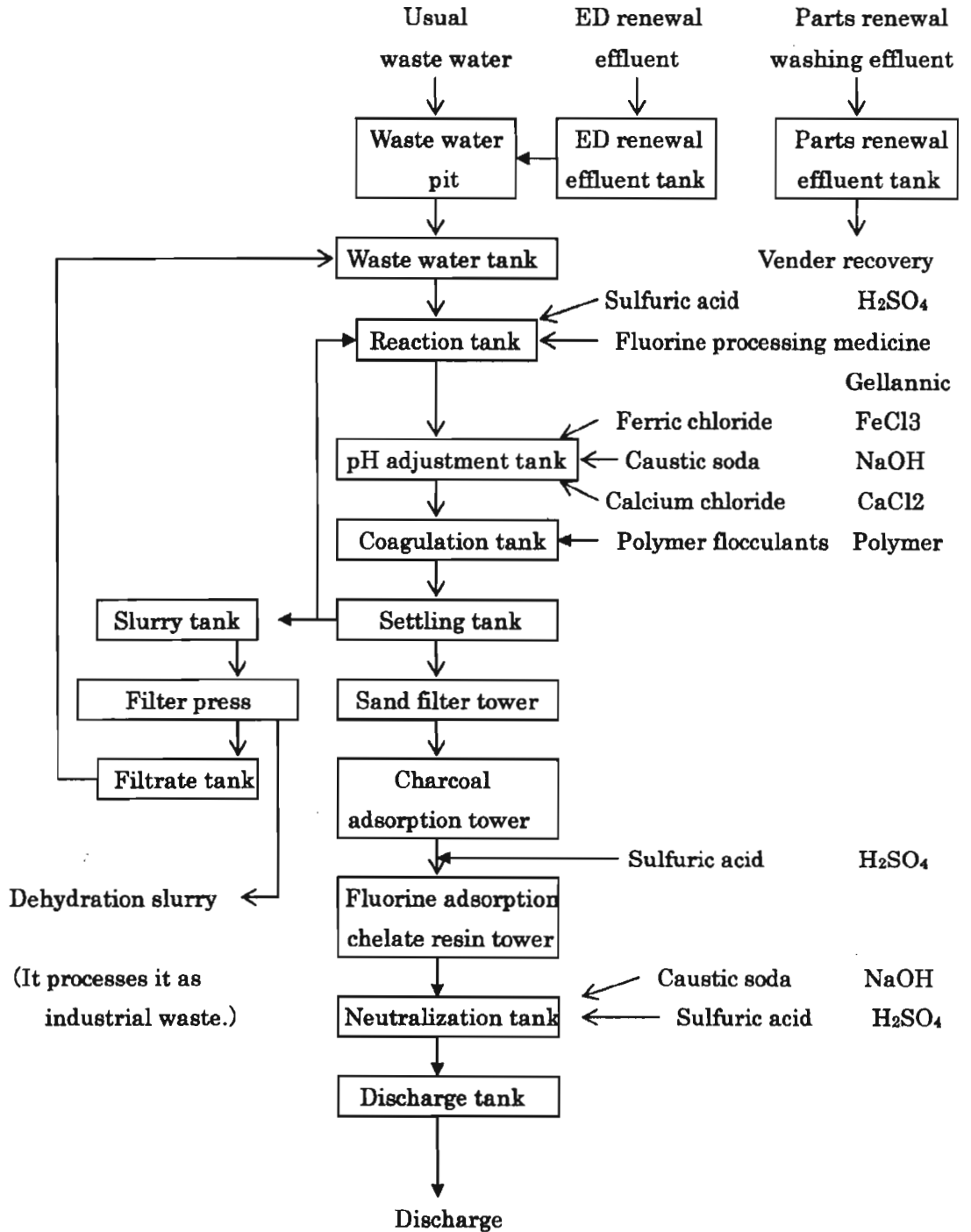
Shot Blasting

The truck frame parts coating is where the parts roll formed and laser holed. Parts are then transferred through shot blasting followed by chemical pretreatment processes. A dust collector with 98% efficiency will be used to control the PM emissions from the shot blasting operations.

Powder Coating

The parts are powder coated (SN-11), and then baked in a 1.3 MMBtu/hr oven (SN-12). The particulate matter emissions from the powder coating operation will be controlled by a fabric filter with a control efficiency of 98%. Any overspray is exhausted through filters before venting to the atmosphere. A gauge measures the pressure drop across the filters. The parts then go through touch-up, inspection, and finally go out to be shipped.

II Processing flow chart



HMM PART ED PAINT candidate material list (HINO MOTERS,Ltd idea)

HINO MOTERS,Ltd
BODY PRODUCTION ENGINEERING DIV.

* Correction May-6.2005
* Page renewal Jun-17.2005
* Correction Oct-26.2005

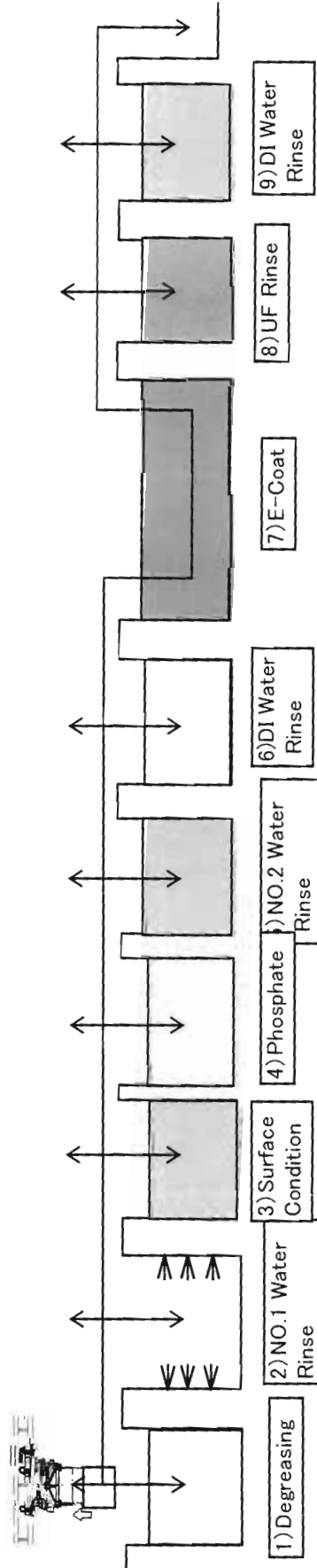
1)PT&ED paint candidate material(HINO's idea)

Process	Material name	Supplier	Actual or New	Unit price "\$/Liter or kg"	Amount of use "g/skid"	Style of packing	
						Appearance	Amount
Pretreatment	Degreasing	Henkel Corporation	Hamura	?	45.6	Powder	15kg/paper bag *1
	Surface condition			?	estimating	Colorless liquid	20kg/per can
	Additive			?	6.8	White slurry	20kg/per can
	Phosphate			?	2.2	Colorless liquid	20kg/poritanc
	Accelerator			?	171.1	Green liquid	18kg/per can
	Additive			?	85.6	Pale yellow liquid	20kg/poritanc
E-coat	F1 pigment	PKAF	TMMK,NUMMI	?	In irregularity	Colorless liquid	20kg/poritanc
	F2 resin			?	In irregularity	Colorless liquid	20kg/poritanc
				?	168.8	Black liquid	55 gallon/drums
				?	1,406.6	Black liquid	55 gallon/drums

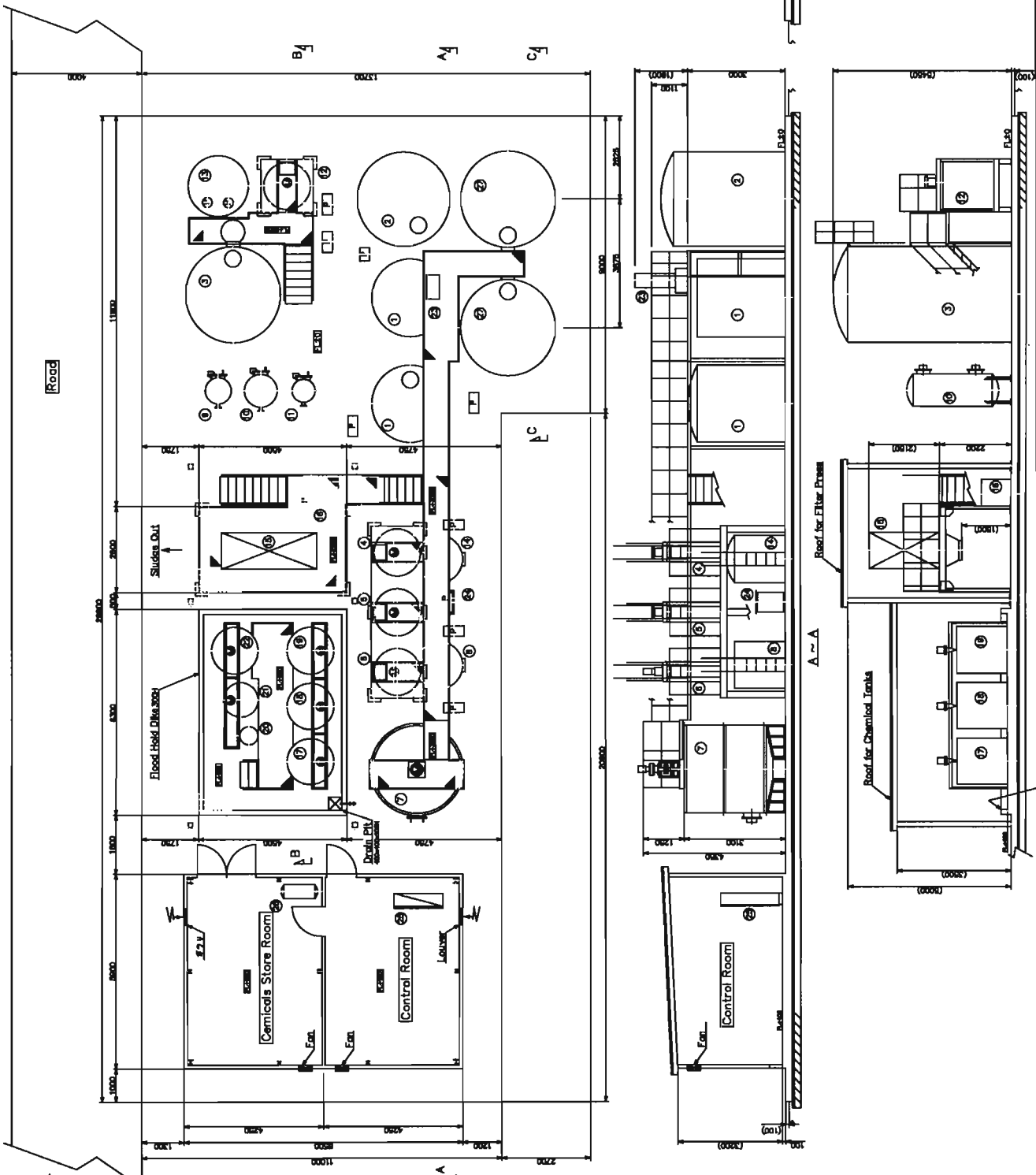
*1 Bag to which inside is Cortanged so that powder should not leak

2)PT&ED Process Outline

Item	Content	Remarks
Paint method	Full Dip	
Conveyer system	Auto carrier	
Tact time	4 min/skid	6 palette/skid
Work hours	456min*2-shift	
Production capacity	54743 skid/year	456min * 2-shift *245day *98% efficiency :98%



No	1	2	3	4	5	6	7	8	9		
										E-Cost Process	
Process	Degreasing			Pretreatment Process						E-Cost Process	
	Degreasing	NO.1 Water Rinse	Surface Condition	Phosphate	NO.2 Water Rinse	DI Water Rinse	E-Coat	UF Rinse	DI Water Rinse	DI Water Rinse	
Material	Parco cleaner L4480 or E2001L	Industrial water	Fixodine X (AD-4977)	Bonderite SX35 AC-131 (AD-4813,4856)	Industrial water	DI Water	ED6601 F1(Black) ED6601 F2(Black)	UF Rinse	DI Water	DI Water	
Supplier	Henkel Corporation	-	Henkel Corporation	Henkel Corporation	-	-	PKAF	-	-	-	
Method	Full Dip	Spray	Full Dip	Full Dip	Full Dip	Full Dip	Full Dip	Full Dip	Full Dip	Full Dip	
Temp	45~55°C	-	The temperature condition is unnecessary.	33~37°C	-	-	28~30°C	-	-	-	
Tank size	7 ton	7 ton	7 ton	7 ton	7 ton	7 ton	16ton	8ton	8ton	8ton	



NO.	TITLE	Q.T.Y.	Capacity (kg)
1	Waste Water Tank	2	W=12000kg
2	ED Renewed Effluent Tank	1	W=22000kg
3	Perforated Effluent Tank	1	W=33000kg
4	Reaction Tank	1	W=10000kg
5	pH Adjustment Tank	1	W=10000kg (Double Pressure)
6	Coagulation Tank	1	W=2000kg
7	Settling Tank	1	W=2000kg
8	Pumping Up Water Tank	1	W=2000kg
9	Sand Filter	1	W=2000kg
10	Fluoride Adsorption Tower	1	W=4000kg
11	Fluoride Adsorption Charcoal	1	W=2000kg
12	Neutralization Tank	1	W=3000kg
13	Discharge Tank	1	W=2000kg
14	Slurry Tank	1	W=2000kg (Double Pressure)
15	Filter Press with Automatic Expression	1	W=4000kg
16	Reduction Tank	1	W=800kg
17	Fluoride Treatment Tank [A]	1	W=2000kg
18	NaOH Tank	1	W=2000kg
19	CaCl ₂ Tank	1	W=2000kg
20	CaCl ₂ Tank	1	W=2000kg
21	H ₂ SO ₄ Tank	1	W=1000kg
22	Polymer Tank	1	W=2000kg
23	Fluoride Sludge Equip.	1	W=2000kg
24	Control Room	1	W=300kg
25	Control Room	1	W=300kg
26	Compressor	1	W=300kg
27	Emergency Tank	2	W=33000kg

納入先 USER	Hino Motors, Ltd. (U.S. Plant)	図号 A-2804	設計 DATE	承認 DATE	縮尺 1/50	頁数 1/50	設計 DATE	承認 DATE	縮尺 DATE	頁数 DATE
名 称	Waste Water Treatment Facility Site Plan	日付								
TITLE										

納入先
USER
名 称
TITLE

Hino Motors, Ltd.
(U.S. Plant)

図号
A-2804

設計
DATE

承認
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縮尺
1/50

頁数
1/50

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中川化学装置株式会社
NAKAGAWA CHEMICAL EQUIPMENT CO., LTD.