

FACTORY VISIT REPORT

Rahimafrooz Accumulators Limited

&

Rahimafrooz Battery breaking and recycling center

West Panisail, Zirani Bazar

Kashimpur, Gazipur, Bangladesh

&

Khagan, Birulia, Savar, Dhaka

Infrastructure Development Company Limited

May 2017

BACKGROUND

Rahimafrooz Accumulators Limited (RAL), got approval for 19 models of solar batteries from IDCOL's technical standard committee.

They have completed the required ISO 14001:2004 and OHSAS 18001:2007 compliances on 04 December, 2013. To assess the actual compliance scenario, IDCOL's Environmental Specialist visited the battery manufacturing plant & recycling (Breaking & Smelting) units, according to the requirement of ESMF of IDCOL on May, 2017.

1. OBJECTIVE OF THE VISIT

The objective of the visit was to assess the actual progress accomplished by Rahimafrooz battery manufacturing & recycling unit to meet the requirement of ISO 14001, OHSAS 18001 and ESMF of IDCOL as well.

2. Brief Description

RAL is located at West Panisail, Zirani Bazar, Kashimpur, Gazipur. The factory comprises an area of about 75,000 sq.ft of own land. There are 532 workers (all male) and 56 management officials working in the plant. At present RAL operates in three shifts with duration of 8 hours each, produces about 1200 batteries every day. RAL facilitated with modern battery manufacturing machineries and skilled manpower.

Rahimafrooz battery breaking and recycling units are located at West Panisail, Zirani Bazar, Kashimpur, Gazipur and Khagan, Birulia, Savar, Dhaka. Both of the unit comprises 2000 sq.ft and 10,500 sq.ft of own land. There are 15 workers (all male) and 3 management officials working in the breaking unit and 30 workers (all male) and 5 management officials working in the recycling unit. 10 metric tons of hard lead are being produced in every day.

3. ESMF compliance scenario at battery manufacturing & recycling

facilities

RAL was found to practice the requirement of ISO 14001 and OHSAS 18001 standards at a satisfactory level but have room for improvement. RAL has started the practice of keeping records of compliances but require more improvement in this area.

Rahimafrooz battery breaking and smelting units also found to practice the requirement of ISO 14001 and OHSAS 18001 standards at satisfactory level but have room to improvements.

ETP is one of the most important concern for battery manufacturing and recycling industries to mitigate effluent pollution. RAL and Rahimafrooz smelting unit established a well-designed ETP with capacity of 120 m³/day each, which seems to be adequate to treat the waste water. Rahimafrooz battery breaking unit has a new ETP to treat battery breaking effluents.

Air treatment plant (ATP) are established by RAL battery manufacturing unit and battery smelting unit to protect the health hazards and air pollution during charging and smelting

of lead. The capacity of ATP are 10, 000 m³/hr. at RAL and 35,679 m³/hr at smelting plant, both run 25 days in a month.

Annex 1- Photographs of RAL battery manufacturing facility



Photograph: Factory Safety Layout



Photograph: Alloy melting area



Photograph : A view of welding section



Photograph : MSDS at Acid Storage area

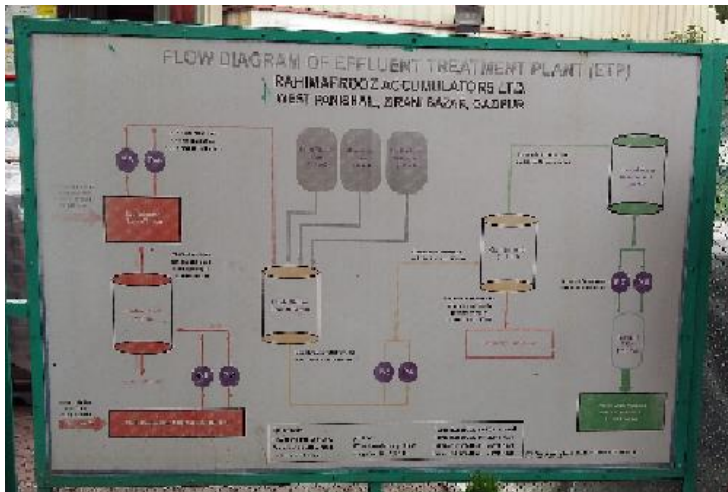
PPE and First Aid



Photograph : First Aid Box



Photograph : RO drinking water technology



Flow Diagram of ETP at RAL



PPE Sign

Fire fighting



Photograph : Firefighting arrangement

Recycling Facility



Photograph: Emergency Eye wash



Photograph: New ETP to neutralize acid wastewater.



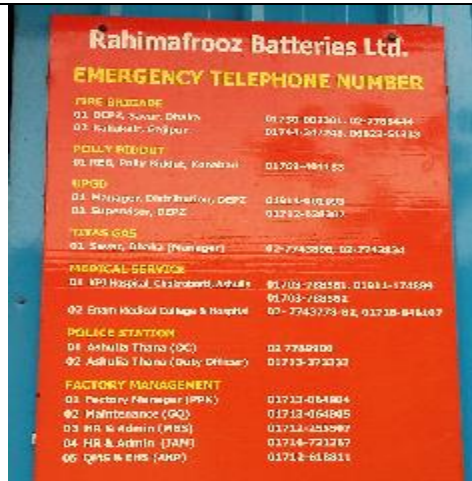
Photograph : Assembly area



Photograph :



Photograph: Emergency Eye wash



Photograph: Important Contacts



Photograph : SOP at Rotary area



Photograph : Furnace Safety Guard with Rotary Pot

FACTORY ENVIRONMENTAL, HEALTH & SAFETY CHECK LIST

Name: Rahimafrooz Accumulators Limited (RAL) & Rahimafrooz Battery Recycling unit

Date: 07-05-2017

Question	Yes	No	Remarks	
<i>Mandatory Questions</i>				
<i>Name of the MR:</i> M. Moinul Alam				
<i>His/her qualification:</i> MSc in Environment				
<i>Management review report / minutes:</i> Held on October 2016				
<i>Budget Allocation:</i> Not specified				
<i>Training report:</i> Maintained properly				
<i>DOE Clearance Certificate:</i> Up to date				
<i>Acid License:</i> Up to date				
<i>EMS & OHASAS Certificate:</i> Up to date				
<i>Civil Defense:</i> Up to date				
<i>ETP design and discharge water QC report:</i> Maintained				
<i>Exits / Evacuation routes</i>				
Are exit signs, evacuation routes illuminated, visible, marked and maintained clear from work areas?	√		RAL: Sign need to be maintained properly. More evacuation sign required	Recycling Units: Room for improvement
Is evacuation plans posted in local language in a prominent place where they can be easily read, with 'You are here' clearly marked?	√			
Do evacuation plans match the floor layout? Also, areas in front of Exits marked with "KEEP CLEAR" markings and maintained clear.	√			
<i>Aisles</i>				
Are aisles clearly marked and spacious and maintained clear of any obstruction?		√	RAL: There are some obstruction have been observed during the visiting time. Recommend to keep the aisles well marked and clear	Recycling Units: There are some obstruction have been observed during the visiting time. Recommend to keep the aisles well marked and clear
Emergency lights maintained properly to provide adequate illumination?	√			
Are all Emergency lights tested monthly and records of test maintained?	√			

Fire Extinguishers/ Hose Reel / Hydrant			
Is there adequate number of fire extinguishers available and the location are clearly marked? Does it maintained clear of obstruction?	√		Fire extinguishers available in the facilities. At least three hose reel and hydrant required in the manufacturing and recycling area.
Are extinguishers visually checked monthly and control tags maintained?	√		
Are fire extinguishers inspected annually by an outside professional agency;	√		

Emergency Preparedness			
Does the facility have any documented emergency preparedness program?	√		
Does the facility conduct evacuation drills and maintain records?	√		
Does the facility maintain test records of fire alarms and Phone numbers of local fire dept(s)/ factory management and Hospitals Ambulance & Police easily available / posted?	√		
Are Assembly areas easily accessible and maintained clear?	√		

Question	yes	No	Remarks
Medical care / First Aid			
Does the First Aid kits provided in all work areas with locations highlighted and easily accessible? Are medicines being checked to ensure that expired medicines are not being administered?	√		Well maintained.
Does the First Aid kits kept unlocked or if the kits locked, are the keys available within close proximity?	√		
Is there adequate number of employees been trained in First Aid by a recognized organization and the certificates checked to ensure the validity?	√		
Does factory conduct checks to ensure that if any first-aid trained employee has left the organization he/she is replaced with another such trained person?	√		

Lead alloy and Chemical Storage Area			
Is there any appropriate warning signs displayed?	√		
Is there an effective ventilation system to discharge fumes?	√		
Is there any effective secondary containment system for liquid chemicals to avoid spillage on floor? Does the floor maintained clean and free of chemical spillage?	√		
Is MSDS (Material Safety Data Sheet) posted in areas where chemicals are stored / being used?	√		
Is there any appropriate PPE (Personal Protective Equipment) are available and being used in the chemical storage and usage areas?	√		More awareness programs need to be arrange in the facilities
Is entry restricted in the chemical storage area?	√		
Does hazardous sign or label being used in all drums, containers, and dispensers clearly labeled?	√		
Eye Wash/shower			
Is there any functional eye wash station available near the chemical storage/usage area/working area?	√		
Question	yes	No	Remarks
Electrical Safety			
Are all electrical switches labeled in English & local language?	√		
Are power-generators suitably earthed?	√		
Is all electrical maintenance carried out, logged?	√		
Are there any loose wires / damaged switch-gear / unplugged connections/ open junction boxes / taped joints etc?			
Are appropriate fire extinguishers installed near panel boards?	√		
Are Exhaust pipes of Power generators insulated?			
Are rubber mats provided in front of all Electric Panel Boards?	√		
Is the Power Generator room maintained free of waste items?	√		

Question	yes	No	Remarks
Personal Protective Equipment			
Are mesh gloves provided to Cutting machine operators? Are they being used?	√		There is a room to improve in this section. Need awareness training and training
Are appropriate gloves / masks / eye protection provided for workers in stain removing operations? Are they being used?	√		
Are ear plugs provided to thread sucking machine operator's power generator operators? Are they being used?	√		
Are Appropriate PPEs provided to workers in the washing section? Are they being used?	√		
Is eye protection provided to button machine operators? Are they being used?	√		
Accident Register are updated			
Are respiratory masks provided to sewing machine / over lock machine operators where fabric dust is generated? Are they being used?	√		
Machinery			
Are finger guards installed on snap button machines? Are they being used?	√		
Are exhaust fans installed at safe heights to avoid injury?	√		
Are all moving parts of transmission machinery adequately guarded?	√		
Are safety devices in working condition?	√		
Are noise levels in work areas within the desired norms?	√		
Waste Water Treatment			
Are all discharges within the parameters defined by the country's Environment laws?	√		
Air Treatment Plant			
Are the air quality within the parameters defined by the country's Environment laws?	√		

Dining and Kitchen Facilities			
Are Kitchen & Dining area floors maintained clean?	√		
Is adequate seating arrangement provided?	√		
Is cooked food kept covered?	√		
Are those serving food using appropriate gloves?	√		
Are fire extinguisher's installed near cooking areas?	√		
Is potable drinking water provided?	√		
Are hand wash and utensils washing areas well maintained?	√		
Bathrooms / Toilets			
Are the number of toilets adequate, marked and segregated for both men and women?	√		Room to improve. Make sure bathrooms and toilets should be clean and safe all time.
Are wash rooms/ toilets well maintained and ventilated?	√		
Is running water available?	√		
House-Keeping			
Are waste chemical removed regularly?	√		
Are floors cleaned regularly to remove dust and garbage?			
Are ventilation system check periodically?	√		
Is garbage appropriately disposed off?	√		
Storage			
Are Chemicals, flammable liquids appropriately stored away from rain and sunlight in well ventilated areas with entry restricted to authorized personnel only?	√		
Are 'No Smoking' signs and appropriate Firefighting equipment installed in storage areas?	√		