



MIDLINE SWEATER LTD. FACTORY

Baro Boyka, Chandona, Gazipur Sadar, Gazipur-1702

(23.999534N, 90.372256E)

20th February 2019





Observation



Lateral stability to be verified



Actual Truss Section (No roof bracing)

No bracing was found at the roof level. Also poor joint connections were observed between steel truss and columns. Factory engineer is required to verify the lateral stability of the shed structure against lateral and vertical loads.



End support condition of truss



Middle support condition of truss



Apparently non-engineered light weight roof shed of extension part



Extension part of Production shed

The support condition of the steel roof was not clear and apparently non engineered. Factory is required to replace the existing shed with an engineering shed.



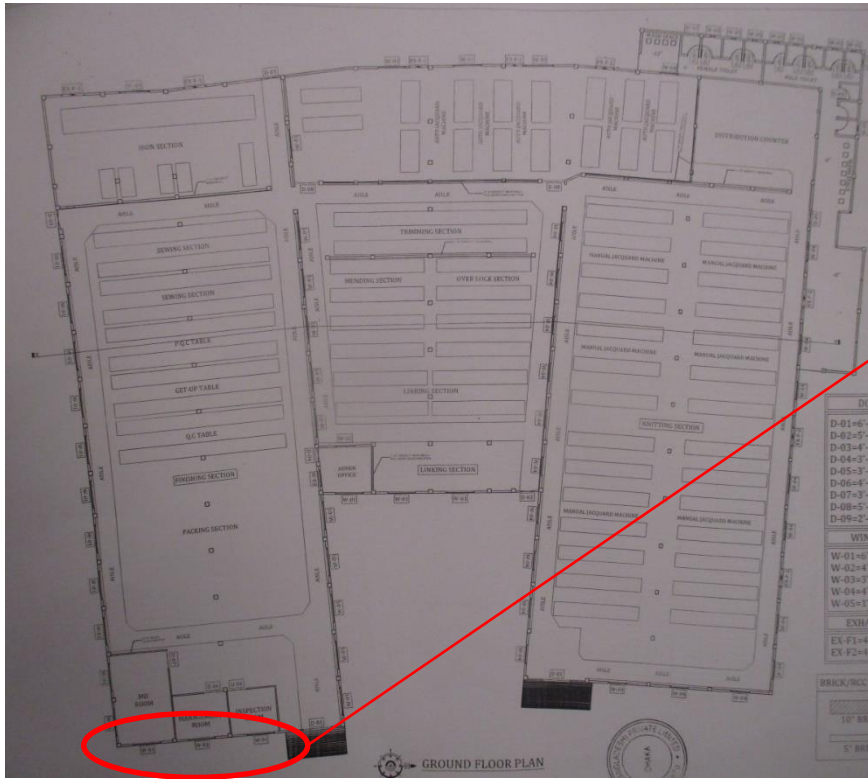
Flimsy steel roof frame



Welded connection between steel member and column's rebar



Crack on west side peripheral masonry wall



Crack was observed in peripheral masonry wall on west side. Factory Engineer is required to identify the reasons and recommend the remedial measures.



Lack of Lateral Stability



Internal truss system with no roof bracing or vertical bracing



Poor welding joint at end point

No bracing had been installed in the winding shed. All truss-wall joints were apparently inadequate. Lateral stability of the structure was not clear. Also, no as-built drawings for this structure was available. Factory is required to produce as built drawings and analyze the lateral stability of the structure against vertical and horizontal loads.



Apparently non-engineered shed



Bonded Ware House is apparently a non engineered shed. The steel roof frame is constructed by angle sections and the wall-steel frame joints are welded. Also no as built drawings of this structure was available. Factory is required to assess the lateral stability of this structure and take necessary remedial actions as required.



Apparently non-engineered roof shed



Steel roof members were supported by RC columns



Flimsy support condition at end of steel member

The support condition of the steel roof was poorly welded with column's rebar. In addition, factory could not provide any structural document of the shed. Factory Engineer is required to produce a full set of as-built drawing reflecting actual condition and assess the lateral stability of the shed against vertical and lateral loads.



Apparently non-engineered shed



Inside Dining & Storage Shed



Deflected purlin



Steel frame- Wall Joints

Dining & Storage Shed is apparently a non engineered shed. The steel roof frame is constructed by angles and the column-steel frame joints are welded. Some purlins were deflected. Also no as built drawings of this structure was available. Factory is required to assess the lateral stability of this structure and take necessary remedial actions as required.



Absence of as-built drawing



No as-built drawing was available on site for the building. Factory Engineer is required to produce a full set of as-built drawing reflecting actual condition



No drawings were available on site



No As-Built drawings were available on site for the structure.
Factory engineer is required to produce as-built drawings which
reflects on-site condition.



Problems Observed

Production shed:

Item 1: Lateral stability to be verified.

Item 2: Apparently non-engineered light weight roof shed of extension part.

Item 3: Crack on west side peripheral masonry wall.

Winding shed:

Item 4: Lack of Lateral Stability.

Bonded ware house shed:

Item 5: Apparently non-engineered shed.

Washing shed:

Item 6: Apparently non-engineered roof shed.

Dining and storage shed:

Item 7: Apparently non-engineered shed.

Utility building:

Item 8: Absence of as-built drawing.

Medical and Guard room:

Item 9: No drawings were available on site.



Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Lateral stability to be verified. (Production shed)	Factory engineer to check the stability of lightweight steel shed against vertical and lateral loads.	6-weeks
2	Lateral stability to be verified. (Production shed)	Carry out remedial works resulting from engineering assessment where necessary.	6-months
3	Apparently non-engineered light weight roof shed of extension part. (Production shed)	Factory is required to replace the existing shed with an engineering shed.	6-weeks
4	Crack on west side peripheral masonry wall. (Production shed)	Factory engineer is required to identify the reasons and provide the remedial measures.	6-weeks
5	Lack of Lateral Stability. (Winding shed)	Factory engineer to survey the whole shed and produce as-built documentation reflecting the as constructed condition.	6-weeks
6	Lack of Lateral Stability. (Winding shed)	Factory engineer to check the stability of lightweight steel shed against vertical and lateral loads.	6-weeks
7	Lack of Lateral Stability. (Winding shed)	Carry out remedial works resulting from engineering assessment where necessary.	6-months



Item No.	Observation	Recommended Action Plan	Recommended Timeline
8	Apparently non-engineered shed. (Bonded ware house shed)	Factory engineer to survey the whole shed and produce as-built documentation reflecting the as constructed condition.	6-weeks
9	Apparently non-engineered shed. (Bonded ware house shed)	Factory engineer to check the stability of lightweight steel shed against vertical and lateral loads.	6-weeks
10	Apparently non-engineered shed. (Bonded ware house shed)	Carry out remedial works resulting from engineering assessment where necessary.	6-months
11	Apparently non-engineered roof shed. (Washing shed)	Factory engineer to survey the whole shed and produce as-built documentation reflecting the as constructed condition.	6-weeks
12	Apparently non-engineered roof shed. (Washing shed)	Factory engineer to check the stability of lightweight steel shed against vertical and lateral loads.	6-weeks
13	Apparently non-engineered roof shed. (Washing shed)	Carry out remedial works resulting from engineering assessment where necessary.	6-months



Item No.	Observation	Recommended Action Plan	Recommended Timeline
14	Apparently non-engineered shed. (Dining and storage shed)	Factory engineer to survey the whole shed and produce as-built documentation reflecting the as constructed condition.	6-weeks
15	Apparently non-engineered shed. (Dining and storage shed)	Factory engineer to check the stability of lightweight steel shed against vertical and lateral loads.	6-weeks
16	Apparently non-engineered shed. (Dining and storage shed)	Carry out remedial works resulting from engineering assessment where necessary.	6-months
17	Absence of as-built drawing. (Utility building)	Factory engineer to survey the whole structure and produce as-built documentation reflecting the as constructed condition.	6-weeks
18	No drawings were available on site. (Medical and Guard room)	Factory engineer to check, collect information and produce accurate and complete as-built documentation which reflects on-site condition.	6-weeks