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CONSTRUCTION INDUSTRY COUNCIL
建造業議會

香港建築業物料聯會有限公司
HONG KONG CONSTRUCTION MATERIALS ASSOCIATION LIMITED

Sharing of a Showcase Project using Prefabricated Re-bars (From RSS's Point of View)

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(WSP - Resident Structural Engineer)

Showcase Project Summary

High-rise building with 16 storeys
(Non-residential building without basement)
Raft RC footing on rock
RC and structural steel structures
Construction site features:

- Relatively confined site area
- Only one site entrance at quite busy road
- Limited storage area

On-site Delivery of steel reinforcements (Not prefabricated)

- Storage of steel reinforcements (implementation of Colour Code System)
- Checking materials/documents (Delivery notes, Stockist Cert., Mill Cert., etc)
- Sampling of test specimen (according to CS2, specifications/contracts)
- Tests by Laboratory under HOKLAS
- Pending for test results (or retest for failure) before fabrication/fixing
- Fabrication at on-site bending yard

On-site Delivery of prefabricated steel reinforcements

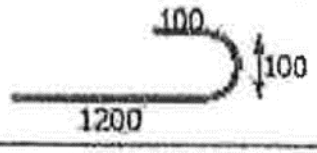
- Storage of prefabricated steel reinforcements
- Checking materials/documents
  - Delivery notes
  - Bar bending schedules (BBS)
  - Order traceability reports
  - Certificates of compliance
- Ready for use

- Certain amount of straight re-bars with different sizes are stored for any on-site amendments of re-bars fixing works (re-bar bending machine is ready for use in site)

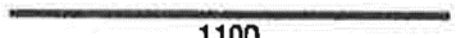
Samples of documents:

- Bar Bending Schedule

BBS: DC193a (POC-DC-109) 24/7/2020 Page: 2

Mark	Diameter	Grade	Quantity	Shape Code	Unit length (mm)	Total length (m)	Weight (kg)	Shape
4	12	500B	44	13a	1,300	57.2	50.79	

4) 深陣3面鐵; 格鐵 **313.68 kg**

1	40	500B	15	0	1,100	16.5	162.76	
2	40	500B	18	0	850	15.3	150.92	

Samples of documents:

- Order Traceability Report

Order: DC193a (POC-DC-109)

Dia (mm)	A/W (Kg)	Original Material	Grade	Bar Pattern	Stockist Cert. No.	Mill Certificate No.	Test Report No.
10	5	Y10 x 12.000M	500B	INA1	T9001-166	2019 -20/0401138708_000010_728 0264399	GE1918R001517A, GE1918R001621; GE1918R001529; GE1918R001523
12	2,067	Coil-12mm	500B	SPN17	T9001-141	250207494	GE1918R001261, GE1918R001320; GE1918R001287; GE1918R001274
16	644	Y16 x 12.000M	500B	TAW13	T9001-175	PS20200320-2	GE1918R001538; GE1918R001550; GE1918R001544
32	423	Y32 x 12.000M	500B	TUK33	T9001-113	1474	GE1918R001181; GE1918R001171; GE1918R001162
40	5,613	Y40 x 12.000M	500B	TUK33	T9001-101	1474	GE1918R001128, GE1918R001178A; GE1918R001114; GE1918R001100

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Photos of prefabricated re-bars (delivered on site)

Summary of routine site operation

- Contractor (re-bars fixing sub-contractor) prepares BBS and orders prefabricated re-bars as per construction drawings
- On-site delivery of prefabricated re-bars (RSS checks materials on site)
- Prefabricated re-bars are ready for use

Advantages and disadvantages of using prefabricated re-bars

Advantages:

- Saves on-site storage area for re-bars stacking and bending yard
- Reduces the amount of wastes of re-bars
- No test for prefabricated re-bars is required (saves time and resources)

Disadvantages:

- Accurate time control and estimate for ordering of prefabricated re-bars is required
- Feasibility of last-minute revision (on-site) of RC details is limited

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Thank You