

ALMARZOUQI

MANAGEMENT CONSULTANCIES

Technical report

Upon the request of

Subject: technical analysis of the subject of dispute concerning bolts and its accessories

Criminal Case Number: /2010

Dubai Courts

Filed by:

The Public Prosecution

The applicant:

The purpose of the report: to be submitted to Dubai Courts as an attachment to the defendants' files: 1.- a citizenship

2.....- a national

Reporting date: 3/October/ 2016

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Note: submitted a request for us to provide a technical report concerning the subject of dispute between the parties. provided us with some documents including technical, financial and legal documents in addition to the documents submitted by the contracting company in the proceedings of its claim before the Public Prosecution and Dubai Courts and had been briefed with the legal responses of the parties' agents. Moreover, we have prepared our report based on the documents submitted to us, and we committed ourselves to remain neutral in preparing the report to the extent reasonably possible, relying on our expertise in the field of engineering contracts.

We enclose our basic report along with this supplementary report, as they are a single unit to understand the nature of the dispute. In addition, we will mention in our supplementary report the new documents and witnesses statements and then comment and summarize the final result, if our conclusion is in need of modification or in case of the original report results remain unchanged. The introduction of any new documents by any party who has not presented it previously could change the tenor of the report and our findings. However, we cannot change this report unless new documents to be submitted officially or corrected through a conclusive technical response against what we have mentioned in our report.

First: References referred to in preparation of the original report:

The documents annexed to this report from 1 – 1456, and in the report, the page number will be referred to in green, which include the following in particular:

1. The original report of the deputized expert submitted to the esteemed court.
2. The supplementary report of the deputized expert submitted to the esteemed court.

3. The testimony of the deputized expert to the esteemed court dated 27/4/2011 in the case 40881/2010 penalty.
4. Statements of Claim and rejoinders of both parties to the reports of the deputized expert.
5. The Court of First Instance judgment in the case.
6. Sample examination reports issued by
7. Electronic and paper communications between the two parties before and after the agreement and minutes of meeting.
8. Financial documents submitted by the defendant.
9. Standard Specifications No. BS 3692 – 1967 agreed upon between the parties for certain quantities.
10. Standard Specifications No. ISO898 -1 which relied on in its claim.
11. Standard Specifications No. ISO898 – 1:1988, which relied on in its claim.
12. Standard Specifications No. BS EN ISO 898 – 1:1999, which is similar to ISO 898-1:1999.
13. Standard Specifications No. BS EN ISO 898 – 1:2001.
14. The certificate of approval from the consultant, which indicates that the defendant is a supplier not a manufacturer of the materials of anchor screws, hex bolts and u shaped screws.

Second: a brief introduction about the contending parties:

1. JT METRO JV (Complainant):

Which is considered the sub-contractor for the main contractor "Mitsubishi japan" (document 193), incorporation between two companies, one of them is Turkish and the other is Japanese to undertake a joint project in this project. They do not hold separate business license. This incorporation falls under a Union of companies called DUBAI RAPID LINK CONSORTIUM for the execution of the metro project in Dubai according to the license issued from roads and transport Authority in Dubai (document 98) and which includes the following companies:

- Obayashi corporation
- Kajima corporation
- Yapi Merkezi
- Mitsubishi Heavy Industries
- Mitsubishi corporation

Obayashi Corporation and Yapi Merkezi joined in an internal coalition under the name of JT METRO JV, the Complainant. The Japanese Obayashi Corporation has more than 120 years of work experience in contracting industry and works in different parts of the world. As for Yapi Merkezi it is a Turkish company established since 1965, which works in the field of contracting and rail projects construction. The foregoing prove that they are well crafted to the extent needed to know all technical details, required specifications and monitor incoming materials and to check its conformity with standards during their course of works.

2. (the defendant)

It is important to know the size of the defendant company, business and its customer in dealing with the case that is the subject of dispute. Before we reach a result, we would mention the following facts about the defendant's company, based on our inspection of the defendant's factory:

1. Land and factory area.

Schedule 1

The total land area in square meter	32,261 m2
The total area of the factory in square meter	7,259.35 m2
Offices area in square meter	940 m2
Roofed warehouses area in square meter	1131,6 m2
opened warehouses area in square meter	22,930.05 m2

2. The total number of employees is 213 employees.

3. The number of machines used 161 is machine.

4. The number and kinds of products from the factory.

5. The factory produces various types of steel products, which are bolts, nuts, and others according to the following (Bars, Eye Bolts, Allen Bolt, U-Bolt, Plates Clamps, Screws, Washers, Nuts, Threaded Bars, Anchor Bolts, Hex Bolts, Stud Bolts).

6. The annual production of iron clamps and bolts of

Metals manufactured weight =. 6,788,119 kg

The number of pieces produced = 52,402,745 pieces

In addition, by studying the number of pieces contained in the invoices, we can find out the following:

Schedule 2

Document	The total number of pieces supplied in accordance to the invoice
351	1072
352	134
353	500

354	624
355	8100
356	10584
357	3888
358	11760
359	3498
360	3024
361	10500
362	1746
363	1674
364	1521
365	3000
366	3351
367	3540
368	2700
369	9
370	726
371	1530
372	1200
373	1020
374	3111
375	2550
376	480
377	3010
Total	84852

This means that the total is 84,852 pieces sold to the Complainant. And by calculating the ratio, it becomes clear that the percentage of pieces sold to the Complainant from the total factory production is equal to = 0.16%.

7. Importing companies and institutions of pieces from

A. Saudi Aramco Company

B. ADMA-OPCO Company in Abu Dhabi

- C. ADNOC Distribution Company
- D. ADGAS Abu Dhabi Company
- E. Bruges chemical company owned by ADNOC Company
- F. Oman Petroleum Development Company
- G. Qatar Petroleum Company
- H. Kuwait Oil Company
- I. Kuwait National Petroleum Company
- J. Egyptian Petroleum Company ENPPI
- K. Syrian Al Furat Petroleum Company
- L. Dubai international airport
- M. Abu Dhabi International Airport
- N. Saudi SABIC Company
- O. Iraqi Shell Company

List of machines in the factory:

1. Thread Rolling AB/Mach/001
2. Chamfering Machine I AB/Mach/002
3. Chamfering Machine II AB/Mach/003
4. Automatic Band Saw Cutting Machine I AB/Mach/004
5. Automatic Band Saw Cutting Machine II AB/Mach/005
6. Radial Drilling Machine AB/Mach/006
7. Hex Saw Cutting Machine AB/Mach/007
8. Stamping / Marking Machine AB/Mach/008
9. Lathe Machine I AB/Mach/009

10. Lathe Machine II AB/Mach/010
11. Lathe Machine III AB/Mach/011
12. Surface Grinder AB/Mach/012
13. Chaser Threading Machine I AB/Mach/013
14. Chaser Threading Machine II AB/Mach/014
15. Chaser Threading Machine III AB/Mach/015
16. Chaser Threading Machine IV AB/Mach/016
17. Chaser Threading Machine V AB/Mach/017
18. Grinder Wheel AB/Mach/018
19. Bending Machine AB/Mach/019
20. Taping Machine AB/Mach/020
21. Ridgid Power Threading Machine AB/Mach/021
22. Fixed Drill Machine AB/Mach/022
23. Nut Forming Machine AB/Mach/023
24. Chamfering Machine AB/Mach/024
25. Disc Cutter Manual AB/Mach/025
26. Air Compressor AB/Mach/026
27. Welding Plant AB/Mach/027
28. Gas Cylinder AB/Mach/028
29. Column Band Saw AB/Mach/029
30. Welding Plant AB/Mach/030
31. Hydraulic Press AB/Mach/031
32. Nut Passing Machine 1/2" AB/Mach/032
33. Nut Passing Machine 1/2" AB/Mach/033
34. Nut Passing Machine 3/4" AB/Mach/034
35. Nut Passing Machine 3/4" AB/Mach/035
36. Chaser Machine 1 1/2" AB/Mach/036
37. Chaser Machine 1" AB/Mach/037
38. Welding Plant AB/Mach/038
39. Gas Cutting Machine VCM AB/Mach/039
40. Gas Cutting Machine VCM AB/Mach/040
41. Grinder Wheel AB/Mach/041
42. Lathe Machine AB/Mach/042
43. PTFE Oven - 1 (Small) AB/Mach/043

44. Heat Treatment Machine "M" AB/Mach/044
45. Milling Machine AB/Mach/045
46. Metal Gathering Machine (Small) AB/Mach/046
47. Automatic Chamfering Machine AB/Mach/047
48. Power Press Machine (100 Tons) AB/Mach/048
49. Power Press Machine (75 Tons) AB/Mach/049
50. Power Press Machine (50 Tons) AB/Mach/050
51. Power Press Machine (25 Tons) AB/Mach/051
52. Forging Machine AB/Mach/052
53. Furnace - 1 AB/Mach/053
54. Metal Gathering Machine (Big) AB/Mach/054
55. Furnace - 3 AB/Mach/055
56. Turning Machine - 1 AB/Mach/056
57. Turning Machine - 2 AB/Mach/057
58. Turning Machine - 3 AB/Mach/058
59. Slotting Machine AB/Mach/059
60. Hex Cutting Machine AB/Mach/060
61. Surface Grinder AB/Mach/061
62. Lathe Machine - 1 AB/Mach/062
63. Chaser Machine AB/Mach/063
64. Radial Drilling Machine AB/Mach/064
65. Disc Cutting Machine AB/Mach/065
66. Straightening Machine AB/Mach/066
67. Drowning Machine AB/Mach/067
68. Electro-Galvanizing Barrel - 1 AB/Mach/068
69. Electro-Galvanizing Barrel - 2 AB/Mach/069
70. Electro-Galvanizing Barrel - 3 AB/Mach/070
71. Electro-Galvanizing Barrel - 4 AB/Mach/071
72. Hot Dip Galvanizing AB/Mach/072
73. M-Treatment AB/Mach/073
74. Electro-Galvanizing Tank AB/Mach/074
75. Thread Rolling Machine - 2 AB/Mach/075
76. Thread Rolling Machine - 3 AB/Mach/076
77. Stamping / Marking Machine- 2 AB/Mach/077

78. Automatic Band Saw Cutting Machine - III AB/Mach/078
79. Chamfering Machine - III AB/Mach/079
80. Sand Blasting Machine AB/Mach/080
81. Nut Tapping Machine (Dual) AB/Mach/081
82. Column Bandsaw Machine - II AB/Mach/082
83. Automatic Chamfering Machine - II AB/Mach/083
84. Chaser Machine AB/Mach/084
85. Turning Machine (Small) - 1 AB/Mach/085
86. Turning Machine (Small) - 2 AB/Mach/086
87. Turning Machine (Small) - 3 AB/Mach/087
88. Centerless grinder AB/Mach/088
89. Thread Rolling Machine - 4 AB/Mach/089
90. Drilling Machine AB/Mach/090
91. Arc Welding Machine - 1 AB/Mach/091
92. Lathe Machine AB/Mach/092
93. Air Compressor AB/Mach/093
94. Drilling Machine AB/Mach/094
95. MIG Welding Machine - 1 AB/Mach/095
96. MIG Welding Machine - 2 AB/Mach/096
97. Lathe Machine AB/Mach/097
98. Lathe Machine AB/Mach/098
99. Lathe Machine AB/Mach/099
100. Thread Rolling Machine - 5 AB/Mach/100
101. Power Press Machine AB/Mach/101
102. Thread Rolling Die Re-Grinding AB/Mach/102
103. Cylindrical Grinding Machine AB/Mach/103
104. Automatic Chamfering Machine AB/Mach/104
105. Manual Chamfering Machine AB/Mach/105
106. Fork Lift AB/Mach/106
107. Lathe Machine AB/Mach/107
108. Diesel Generator AB/Mach/108
109. Automatic Bandsaw Cutting - 6 AB/Mach/109
110. Automatic Bandsaw Cutting - 7 AB/Mach/110
111. Engraving Machine AB/Mach/111

112. Chaser Machine AB/Mach/112
113. Drilling Machine AB/Mach/113
114. Shaper Machine AB/Mach/114
115. Lathe Machine AB/Mach/115
116. Chaser Machine AB/Mach/116
117. Chaser Machine AB/Mach/117
118. Chaser Machine AB/Mach/118
119. Chaser Machine AB/Mach/119
120. Chaser Machine AB/Mach/120
121. Lathe Machine AB/Mach/121
122. Surface Grinder AB/Mach/122
123. Automatic Bandsaw Cutting - 8 AB/Mach/123
124. Shaper Machine - 2 AB/Mach/124
125. Shaper Machine - 3 AB/Mach/125
126. Mechanical Galvanizing Machine AB/Mach/126
127. Chaser Machine AB/Mach/127
128. Bench Die Grinder AB/Mach/128
129. Chaser Machine 1/4" - 1" AB/Mach/129
130. Chaser Machine 1/2" - 2-1/2" AB/Mach/130
131. Chaser Machine 2" - 4" AB/Mach/131
132. Air Compressor (Screw Type - 1) - Dalgikaran DVK
AB/Mach/132
133. Air Compressor (Screw Type - 2) - Ceccato Aria 20 DX
AB/Mach/133
134. Fan Cooler - 1 AB/Mach/134
135. Fan Cooler - 2 AB/Mach/135
136. Bench Steel Brush Wheel Grinder - 1 AB/Mach/136
137. PTFE Oven - 2 (Big) AB/Mach/137
138. Paint Booth (PTFE) AB/Mach/138
139. Air Dryer AB/Mach/139
140. Arc Welding Machine - 2 AB/Mach/140
141. Mig Welding Machine - 3 (100% Duty Cycle) AB/Mach/141
142. Vertical Job Rotating Machine AB/Mach/142
143. Chemical Liquid Filter - 1 AB/Mach/143

- 144. Chemical Liquid Filter - 2 AB/Mach/144
- 145. Rectifier Transformer - 1500Amps AB/Mach/145
- 146. Rectifier Transformer - 1000Amps AB/Mach/146
- 147. Rectifier Transformer - 800Amps AB/Mach/147
- 148. Bench Steel Brush Wheel Grider - 2 AB/Mach/148
- 149. Immersion Water Heater - 1 (1Kw Heaters) AB/Mach/149
- 150. Immersion Water Heater - 2 (1Kw Heaters) AB/Mach/150
- 151. Immersion Water Heater - 3 (1Kw Heaters) AB/Mach/151
- 152. Centifugal Dyer - 1 AB/Mach/152
- 153. Centifugal Dyer - 2 AB/Mach/153
- 154. Material Cleaning Tank AB/Mach/154
- 155. Acid Bath Tank AB/Mach/155
- 156. Acid Pickling Tank (GI) w/ Scrubber AB/Mach/156
- 157. Acid Pickling Tank (HDG) w/ Scrubber AB/Mach/157
- 158. Air Blower - Tank Type AB/Mach/158
- 159. Air Blower - Impeller Type AB/Mach/159
- 160. Scrubber Plant (GI) AB/Mach/160
- 161. Scrubber Plant (HDG) AB/Mach/161

Conclusion:

1. That the parties of the conflict are **traders** who specialized in their field for a long period and they are aware of all the requirements of the specifications required for materials subject of the dispute.
2. The complainant is a union of prestigious companies, which is specialized in the field of contracting and rail projects construction worldwide.
3. **The complainant's** factory is one of the largest factories and its products are distributed all over the Middle East, as the factory's area is more than 7,000 square meters.
4. We have noticed during our inspection of the factory that there is specialization in manufacturing each piece and its manufacturing mechanism from the beginning to

the end. The storage is divided into two sections within the factory, one inside the factory and the other is outside. There are also methods of packaging products according to the requests of the customers.

5. Most of the defendants' customers are consisted of governmental entities working in the Petroleum industry that require strict and precise specifications. Which means that defendant is aware of customers' requirements and specifications.

6. The total pieces sold to the complainant represents a proportion less than 0.16% of the total production of the factory.

Thirdly: the contractor method of metro project implementation:

1. It is unequivocally important to know the mechanism of the metro project implementation, which is owned by Dubai government, as there are a consultant, a main contractor (a union of contractors) and subcontractors and suppliers.

2. Metro project is based on a set of standard specifications that relate to various devices and equipment, which had been prepared by the main contractor including the design consultant.

Fourth: working nature of the main and sub consultant, the main contractor and the complainant of the project subject to claim:

1. The adoption of materials by the consultant is subject the submission of a formal letter from the contractor in accordance with the models prepared the consultant and signed by the main contractor on behalf of himself not by any of his subcontractors or suppliers. Therefore, the task of taking approvals and permits concerning the materials and their suppliers is the responsibility of the main contractor.

2. The method of adoption of the materials by the consultant begins from the location where the contractor applies for a request of materials approval, the consultant's engineer at the site expresses his remarks and then the contractor makes corrections in the way of introduction, if necessary, to the extent required to obtain the final approval. If the approval cannot be granted, then the matter should be presented before the project engineer who is specialized in management to assess it from all sides and decides what is best for the project.

3. The tasks of providing material approvals from the owner or the competent official authorities lie on the main consultant in the traditional way of completing projects. The followed procedure is as follows, the main contractor submits a request for approval to adopt materials to the main consultant and then the main consultant begins to review and make remarks and take the owner's consent, if necessary.

Fifthly: the contractual relationship between the parties:

a. The contractual relationship between the roads and transport Authority and the main contractor is designing, implementation, supervision, and maintenance. Moreover, the consultant SYSTRA/PARSONS whose name was mentioned in this dispute, are working for the roads and transport authority as consultant to develop a general perception and the needs of the authority only, and therefore are not responsible for the executive supervision over the project.

B. The contractual relationship between the parties that is the subject of the claim is based on four key elements:

1. Bid request from the complainant to the defendant (553)
2. The bid offer from the defendant to the complainant (537-538)
3. Purchase orders from the complainant to the defendant (378-399)

4. Invoices issued by the defendant for the complainant (351-377)

These key elements of the contract executed between the parties consist of agreeing on:

1. Approval of the defendant as a supplying company (document 439)
2. Specifications according to bid offers from the defendant (537-538)
3. Specifications according to purchase orders from the complainant and what its general conditions (457-458)
4. The numbers according to purchase orders from the complainant and the numbers according to invoices issued by the defendant (schedule 3)
5. Place of delivery according to purchase orders from the complainant. (378-399)

The next schedule demonstrates the difference between the required and what have been delivered and the invoices issued for payment of the delivered pieces:

Schedule 3

Total pieces required in the Complainant's purchase Orders	Value	Document	Total number of pieces supplied according to the invoice	Value	Document
358	13305.7	378	1072	13305.62	351
15648	28326.3	379	134	1407	352
1500	1250	380	500	1250	353
3528	12136.4	381	624	2563.97	354
8100	10000	382	8100	9999.97	355
3500	11550	383	10584	12136.4	356

3900	13650	384	3888	7550.3	357
7170	29500	385	11760	20776	358
7170	29500	386	3498	12243	359
5700	23900	387	3024	14616	360
3750	18125	388	10500	11550	361
3750	18125	389	1746	8439	362
3600	16400	390	1674	7856.04	363
8706	23300	391	1521	7351.5	364
76380	249068.4		3000	14449.97	365
			3351	11728.5	366
			3540	12390	367
			2700	9450	368
			9	39	369
			726	3509	370
			1530	7395	371
			1200	5800	372
			1020	4930	373
			3111	14201	374
			2550	10644.03	375
			480	2160	376
			3010	4217	377
			84852	231958.3	

We reach a conclusion that there is a difference between what is needed and what was supplied. The pieces delivered is 84.852 pieces, which is more than the pieces required (76.380 pieces), moreover, the pieces delivered value (231.958.30 AED) is less than the materials required (249.068.4 AED). Technically, this means that defendant was modifying its orders in accordance with the site needs. The approval of the delivered materials was done in the presence of the complainant's quality officers, the main contractor and the consultant.

We mentioned in our original report the nature of relationship between the two disputing parties according to the following:

1. The Court of First Instance has concluded in its ruling that the relationship between the parties is supplying of materials and on recurring payments.
2. The supplying relationship that the court concluded in its ruling is not conditional that the supplying of materials should be from the defendant products only, rather it could be from other producers while the defendant is the supplier. "Supply contract is a contract in which the dealer or the manufacturer supplies or provides the employer with goods or services of its production or the production of others in accordance with the specifications agreed upon between the parties ... unless otherwise agreed ... "appeal 176 for the year 2008 Commercial, the hearing of 11/11/2008.
3. There is no agreement between the parties that requires that the supplies must be of the defendant production.
4. There are no agreed-upon specifications other than what have been stated in the contract documents between the parties and it was proven by documents that these specifications have been changed during the purchase orders by the complainant. Moreover, it has been proven that, the complainant received the bolts and nuts, which is the subject of dispute and had installed them and the invoices submitted by the defendant clearly refers to the actual supplied materials according to the amended specifications. In addition, that there are no communications between the parties upon receipt of the materials that indicates the complainant's objection to the supplied materials.
5. The contractual relationship between the two parties began when the defendant communicated with the complainant to ask for its adoption as a supplier for bolts and its accessories namely (Galvanized Anchor Bolts, Hexagonal Nuts and U-Bolts). The project consultant (SYSTRA/PARSONS) adopted in its letter No. 010512 dated 7/3/2007 the defendant as a supplier and not as a manufacturer. The defendant was approved as being a supplier for the construction materials based on the test

certificates that match the specifications of the project and the British standards. The consultant required that the samples must be taken and to match the tests according to the project specifications (document 439).

6. The complainant made a bid request.

7. The defendant presented its prices offer.

8. The complainant approved the price offer.

9. The complainant sent repeated purchase orders according to stations location and specific models accompanied by the supply conditions, which the defendant acknowledged its receipt.

10. The defendant supplied the materials and enclosed with each shipment a notice of materials receipt, and enclosed with some shipments the test papers that determine the tests results.

11. The complainant signed materials' notices of receipt and returned it to the defendant.

12. The complainant used and installed the bolts for a sometime. Thereafter, the company sign was noted to be missing on the heads of some bolts in addition to the presence of rust on some bolts by the roads and transport authority.

13. The defendant issued an invoice for each receipt notice and presented it to the complainant.

14. The materials supplied included materials approved by the consultant previously according to what have been mentioned and no dispute arose due its delivery between the parties. However, the complainant asked the defendant to supply additional materials that was not included in the consultant approval previously but rather was approved lately according to document (678). These materials are:

A. Hex Bolts of different sizes with a standard degree of 8.8 - without specifying Standard specifications **and these materials are the cause of dispute.**

B. Flat renderings – with the standard specifications DIN 125, i.e. German standard specifications.

15. The materials supplied that led to dispute between the two parties are additional materials that was not included in the consultant approval in 2007 of the defendant as a supplier, which was accompanied by quality documents.

16. These materials are specifically the Hex bolts.

17. There are no standard specifications agreed upon in writing between the parties with respect to all the nails except for some nails' shipments which the British standard specifications No. BS 3692 apply in accordance with the amount sent and specified in the notice of receipt and not all the supplied materials.

18. There is no agreement to manufacture all materials by the defendant's factory, as there is no agreement between the parties within the contract documents that explicitly or implicitly exclude importing from china at all.

C. The two parties' conditions according to what have been agreed upon and what is mentioned in the purchase orders and bid offers:

By reviewing document (460-461) which includes the general conditions of the complainant, we find that the general conditions contained non-specific general specifications that let the complainant make several modifications in quality, specifications or numbers. By reviewing the defendant's offer (document 537-537), we find that the offer shows the following:

1. One of the he terms of the offer is that materials to be manufactured and prepared in the factory and by accepting this condition; the buyer must have realized that there will be no special manufacturing for him.

2. The supply will be within four days to the site.

3. That the general specifications of the complainant are the applied specifications.

4. The Hot-dip galvanization method is only used for Concave Washer. However, practically the complainant used to communicate with the defendant to provide it with the required materials and in consecutive and rapid times, which indicates that it is not requiring the special manufacture. In addition, numbers, varieties and specifications was changed and it even changed the Hot-dip galvanization to electro galvanizing. (See p. 751, the specification was changed by handwriting). It is technically known that the protective cover against rust thickness made using Hot-dip galvanization is much thicker than the thickness of the protective cover using electro galvanizing which means more resistance to rust.

D. Analysis of materials' agreed specifications that are the subject of dispute:

We should do a technical analysis of the specifications, as it is the cause of the dispute. It was found that the prosecution in all of its investigations did not focus on what are the agreed specifications. Therefore, the complainant's witnesses and the public prosecution reported a violation of the agreed specifications. However, they did not define what the agreed specifications are so we could judge whether the defendant violated the specifications or not. If this violation really existed, was the complainant the one who ordered it as a modification in the specifications or whether or not the violation was hard to be discovered to be categorized as a violation based on intentional commercial fraud? It is necessary to know, what 8.8 mean according to the specifications? It means that the bolt can withstand a tensile strength up to 80 kilogram per square millimeter, which is equivalent to 113755.294118 psi (document 1288).

Therefore, we will analyze the specifications subject of dispute, this analysis will focus on the following:

1. What are the available specifications and the difference between them?

There are several specifications for the quality of the materials, which is the subject of dispute. There are also some differences in the specifications between several specifications and sometimes in the same specifications but different in the years due to the presence of updates in the laboratory values and tests methods, methods of measurement, conditions of the samples and the method of manufacture. These specifications are as follows: the British: it begin with BS, the international specifications: it begin with ISO, the German: it begins with DIN, the American: it begins with ASTM. The choice of specifications is the responsibly of the project's general consultant. Some consultants want to apply a certain single specifications (for example, the American specifications) to all components of the project due to the possibility that the use of different specifications may affect the overall performance of the project and in particular the critical projects. The Dubai Metro project is considered as one of the critical projects that require specific standards, which the contractor must adhere to in order to achieve the desired overall performance of the project on time.

2. What are the specifications required by the complainant:

Examining the documents showed that the desire of the complainant was the application of the American specifications on the material subject of dispute. It did not disclose that until recently. The document (424) shows that the complainant requested to replace the materials with materials conformed to the American specifications ASTM. That could be one of the main reasons that some bolts got affected and its unsuitability to be used in specific parts of the project because the consultant required these materials to conform to the ASTM to suit the requirements of the other components of the project.

3. What are the international standards applicable to the materials subject of dispute and whether or not they are the specifications agreed upon?

Through examining of the documents presented to us it became clear that the specifications acknowledged by the defendant match what is mentioned in the initial test certificate of materials BS 3692 document (429, 844, 1269) which correspondent to the international standard specifications – ISO 898 – 1:1999 document (1354). The year 1999 is deemed the earliest update before the year of the defendant's products adoption by the consultant in 2007. It is worth mentioning that tests carried out by the were based on:

- A. ISO 898 - 1 without specifying the year to examine the chemical properties (document 890)
- B. ISO 898 – 1:1992 to examine the mechanical properties relating to drag (document 889)
- C. ISO 898 – 2:1992 to examine the mechanical properties relating to durability (document 889)

4. What are the specifications related to rust resistance:

As for specifications related to rust, the agreed specifications as indicated

Above require that the two parties agree on a clear agreement in relation to corrosion resistance. Moreover, these specifications cannot be used to check corrosion resistance. The following was stated in the specifications:

(Document No 1364).

It does not specify requirements for such properties as

- Weldability,
- Corrosion resistance,
- Ability to withstand temperatures above + 300 C (+250 C FOR 10.9) or below – 50 C,
- Resistance to shear stress,

- Fatigue resistance.

These British standard specifications cannot be used in special conditions as in corrosion resistance, which means that the customer requirements for corrosion resistance require another kind of specifications and not the regular orders. This could explain the reason that the complainant changed its requirements in the purchase orders instead of the specifications ordered by the consultant in terms of corrosion resistance because manufacturing stainless steel screws is more expensive and require more time, which the complainant did not want whether to reduce the cost or for lack of time. It is worth mentioning that the specifications subject of the dispute did not refer to the special corrosion resistance specifications (document 1364). However, that was remedied in the new edition in 2013. That indicates to the lack of inclusivity of the corrosion resistance specification between the parties in this subject of dispute, on the contrary to what relate to galvanization layer and quality. That shows that the complainant changed the bolts' galvanization layer to electric galvanizing and even accepted some of bolts without galvanization. The defendant reflected that clearly in its invoices, which negates the possibility of fraud in this matter.

5. What are to the specifications that relates to the presence of factory's sign

As for the specifications relating to factory sign stamp, the agreed specifications as noted above require the manufacturer to put the manufacturer's company sign on the bolt head according to the drawing specified in the specification (document 1381, 1285 – shall be 1344-1441). The specification aims to put a sign in order to distinguish between items and know the manufacturer of each piece in the event of any reference to him for whatever reason.

The specification requires the company to put its name on the bolt and in another location put the volumetric rating (8.8). Does this mean that not putting the logo and the volumetric rating is enough to charge the manufacturer with fraud? This is

associated with the approval of the Complainant upon receipt of these bolts. The Complainant could have returned the bolts in the lack of the company's stamp and the rating stamp, which is a rational and natural thing to do. The consultant should have stopped the installation in this case. Which means that there was a slight doubt whether the Defendant supplied all these bolts or not. Therefore, the one who installed the bolts in the absence of seals made the error; such error could have been remedied and proven. Therefore, what is the reason that made the Complainant install some of the unstamped bolts? The authority officer not the Complainant officer is the one who discovered such unstamped bolts. Was this installing due to the Complainant approval of the bolts that lacks the company's stamp and rating stamp on the bolt head and that such a thing does not necessarily affect the durability of installation? The witness Mohammad Omar who works for the complainant referred to the same when answering the purpose of the bolts (document 1071). We think that even though the specifications required putting the company's stamp and durability strength, however, the complainant receipt of the bolts and installing it indicates to the insignificance of that sign in the view of the complainant. Or that these bolts are supplied by other companies as the witnesses acknowledged that the defendant is not the only supplier of bolts to the complainant.

6. What are the specifications related to the mechanical properties, particularly tensile durability:

The specification illustrates that the mechanical properties are irrelevant in examining tensile strength of the bolt (document 1282 – shall be 1301-1308). What I mean is that the buyer is not concerned by the chemical composition of the bolts as long as it provides the required mechanical power of endurance. The specifications require that the bolt to be able to withstand a tensile strength of 800 – 950 newton per square millimeter (document 1366).

7. Are the mechanical properties' specifications related to the samples source?

What is meant is that, is the samples that was used in the site for a period of time and which was under the power of installing and disengaging suitable to make the mechanical tests described in the specifications? The answer is that the nature of the standard specifications and its mechanism were put so that the manufacturer manufactures the pieces in accordance with the standards contained therein once he claimed the same. Moreover, the buyer can check these specifications used in manufacturing of his material before its acceptance and use. The use of materials in the subject of this dispute leads to lose some parts of its mechanical and chemical properties. **The process of pulling, disengagement and pressing of the iron pieces that is fixed by these bolts affects such pieces. In addition, these bolts exposure to extreme environmental factors, especially extreme heat and moisture, which grades change dramatically from noon to night lead to the loss of a part of their properties because of the thermal stretch and contraction elements.** All of this leads that the achievement of theses specifications standards only applies on the samples taken directly from the factory as a random part of the quantity that will be delivered to the buyer. The situation differs from a buyer to another. Some of them requires to be there personally or his authorized consultant during the making of tests on random samples to check its conformity to specifications. Others ask for a tests certificate issued by the manufacturer. Some of them take samples on delivery to the site and check it prior to its use. If it passed the tests, he would accept it and if it did not pass the tests, he would reject it and request a remanufacturing. According to the agreed specifications in this dispute, the consultant required the complainant to examine each sample on every delivery to check its conformity to the required specifications. However, the complainant did not do that according to the consultant's instructions. Moreover, the specifications specified that if the buyer requested to examine the samples by the manufacturer, it would be by with an additional cost borne by the buyer, unless otherwise agreed. There is no doubt that this means the manufacturer will perform a test on the newly manufactured samples. This leads us to strongly believe that what is meant by examining samples

in accordance with these specifications is the examination of newly manufactured samples and not those used. This is because of the fact that the manufacturer does not have the authority to extract samples once they are installed in the buyer's site ([document 1287](#)). As it has been proven to us that there is no separate agreement concerning the chemical composition of the bolts according to documents submitted to us.

8. What is meant by the measurements contained in the invoices?

Measurements are defined as follows:

Bolts M10 X 50, which means that the bolt's column diameter is 10 millimeters and its length is 50 millimeters ([document 1288](#)).

As the subject of the case is related to a governmental project then the complainant should specify the specifications required by the project's consultant to be able to know whether the complainant reflected these specifications in its relationship with the defendant or not.

Conclusion:

We can conclude several important points from our analysis of the subject of fraud, which are as follows:

1. The contractual relationship is based on the bid request of the complainant followed by the bid offer of the defendants followed by purchase orders the complainant followed by on-site modification in these orders either in numbers, specifications or supply sites and times. Invoices issued by the defendant followed this.
2. It has proven that there is a change between in the purchase orders and what have actually been supplied in relation to numbers, specifications, prices, place and date of supply.

3. It has proven that the complainant did not comply with the consultant request to examine each set of materials when supplied to the site.
4. The supply was on several shipments.
5. There is no agreement between the parties that compels the defendant to supply pieces of its production.
6. There are no standard specifications agreed upon whatsoever between the parties in writing concerning all the nails except for some nails shipments, in which case the British standards No. BS 3692 is applicable and that is according to the amount sent and specified in the supply lists and not all the supplied materials. The specifications approved by defendant conforms to what was mentioned in the material initial test certificate BS 3692 which corresponds to the international standard specifications ISO 898 – 1:1999.
7. The British standards agreed upon cannot be used in special conditions such as corrosion resistance. Therefore, in regard of corrosion resistance requirements, the customer requires an additional type of specifications and not the regular requests.
8. The specification requires putting the company's name on the bolt and the volumetric rating (8.8) in another area.
9. The specification that relates to chemical properties is irrelevant in checking the tensile strength of the bolt. What is meant is that the buyer does not care for the chemical composition of the bolts as long as it produces the required mechanical power of endurance. The specifications require the bolt to be able to withstand a tensile strength of 800 – 950 newtons per square millimeter.
10. What is meant by examining samples in accordance with these specifications is the examination of newly manufactured samples and not those used.

Sixthly: witness statements analysis:

It is necessary to analyze the statements of witnesses to see the reality the dispute in addition to the fact the Complaint.

..... (document 1070):

He is the civil engineer for the Japanese Obayashi Corporation, which is the partner of the Turkish company that formed the coalition of the project (the complainant). We will mention some important excerpts in the testimony of for the purpose of clarification.

..... was hired in 2007 or 2008 pursuant to large purchase orders to supply a large quantity of a specific kind of bolts with specified specifications according to the purchase order with a specified bearing force symbolized by the symbol (8.8) in accordance with the British standards. These bolts will be used in linking the station parts together to form the structure of the stations (23) station as a whole to give the outward appearance and force required for the stations to endure and stability to ensure its proper performance over time.

A. our comment: what is the purpose of installing the bolts? Identifying the purpose leads to understand whether the company's seal is considered the basis for the rejection of the bolts and a cause of the system exposure as a whole to risk or not. If that is the case, the complainant wouldn't have installed the bolts in the first place. How can the complainant receive the bolts and install them while non-sealed with the seal of the company. If that was true, and the complainant knew that, it could have endangered the system as a whole. Therefore, if the complainant really knew such a thing, then it has helped in confirming that it committed a crime, which it contributed in doing, and if that is not the case, it simply means that the presence of this stamp is irrelevant.

And to sign contracts with suppliers of construction materials, with the knowledge that these contractors were signed with subcontractors and suppliers pursuant to the prior written approval of the roads and transport authority for the adoption of

the subcontractors and suppliers. Among these suppliers is the, which was hired in 2007 or 2008 pursuant to large purchase orders to supply a large quantity of a specific kind of bolts with specified specifications according to the purchase order with a specified bearing force symbolized by the symbol (8.8) in accordance with the British standards. These bolts will be used in linking the station parts together to form the structure of the stations (23) station as a whole to give the outward appearance and force required for the stations to endure and stability to ensure its proper performance over time.

For the requirements of the project, a neutral third party approved by the roads and transport authority to ensure the conformity of these bolts to the required specifications should examine a sample from these bolts. We sent a sample to that party to examine it. In addition, whether it is in conformity with the required specifications or not. The report issued by that neutral party which is Indicated that this sample conforms to the specifications specified in the purchase orders, and therefore we sent the delivered quantities to

B. The complainant did not send a copy of this report to the public prosecutor to be examined,

The supervisor in one of the stations noticed the presence of bolts installed in that station that does not bear the commercial name of the supplier "....." which is referred to by the (AB) symbol but bears the durability symbol (8.8). These findings raised his suspicions what made him order to stop the works and ordered to make an inspection of all the stations under construction to confirm the source of these bolts and to examine samples of the installed bolts in these stations to ensure whether it conforms to the required specifications in regard to durability force (8.8) or not. Thus we stopped sending purchase orders to them and as a precautionary measure we put these existing bolts in receivership

C. That the first consideration is the absence of the company stamp or the 8.8 mark and it was not whether there is rust or not.

These findings raised his suspicions what made him order to stop the works and ordered to make an inspection of all the stations under construction to confirm

the source of these bolts and to examine samples of the installed bolts in these stations to ensure whether it conforms to the required specifications in regard to durability force (8.8) or not. Thus, we stopped sending purchase orders to them and as a precautionary measure, we put the already existing bolts in receivership, which, were previously supplied to us by We sent samples of the bolts taken from these stations after its disengagement from its place of installing and another sample of the bolts put in receivership, which was not yet installed, to We received the report which indicated that these bolts do not conform to the specification mentioned in the purchase orders, and so

D. Note that the samples were taken from all the stations, which means it was mixed with bolts of unspecified source of supply because there are several suppliers the bolts and there is no dispute with the complainant company in that matter. The witness has concealed a key fact that the complainant has hired more than one supplier at the same time, in addition, he did not clarify that the complainant hasn't comply with the specifications required by the consultant that include the presence of a mark on the bolt head if that is true.

..... (AB) and I opened the box and asked them to extract a sample to prove that these bolts supplied by them did not bear the company name (AB) which indicated that they imported some quantities from another part that was packed in cartoon boxes which bears the name of their company. They extracted the sample and it was proven that it didn't have the company name (AB) on it, rather it had different stamps with a different companies' names such as the commercial name (ST), other bolts had the (8.8) mark. I told them that we should as an executing company at the request of the roads and transport authority cancel our contract with and hire

E. the contract does not specify that the defendant is the manufacturer but the contract specifies it as the supplier. The date of orders in comparison to the date of delivery is not enough to manufacture but to search the market. It is also noted that the witness held the authority of roads and transport as responsible for changing the supplier. The fact this responsibly belongs to the consultant but the witness wanted to put the blame on the authority of roads as the controller of all approvals,

as the complainant wanted to change but the roads and transport authority did not authorize such a thing. We do not support that.

Provided that our company disengage all the installed bolts in the stations in the same time and send it to your company in order to replace it. We refused their offer for the difficulty of implementing such a thing because there must be an immediate alternative bolt and the disengaged bolt often becomes damaged. Then surprised us by claiming to settle the balance with the amount due to them that is (120.000 AED), in return, we stopped the remaining payments due to them. They informed us that they are going to begin proceedings to claim

F. The defendant's company reply is appropriate from the contractual perspective in its desire to check whether the error was in the bolts supplied by it or the bolts that were supplied by the other companies. The witness response referred clearly that the complainant refused that under the pretext of providing an alternative before that. The complainant company was able to tell the defendant company at the time that all the bolts installed at the stations are supplied from the defendant, but it knew with certainty the existence of a mix regarding that matter what drove it to refuse the company's offer. Also, the witness who is an engineer acknowledged that the bolt if removed becomes damaged, and therefore sending the damaged bolts to a laboratory for testing becomes in contrast of the terms of the specifications on which basis, the laboratory make tests. As the specifications require that, the tests should be done on new samples that have just been manufactured.

Q. does the authority of roads and transport as a representative of Dubai government in Dubai metro project supervise the approval of contracts that you make with the subcontractors and suppliers?

The answer: yes, the authority of roads and transport appointed the SYSTRA/PARSONS office for the adoption of contracts approvals, which we make with subcontractors and suppliers pursuant to a written agreement, sent to us by them.

G. Witness testimony in this area needs prove. As the supply orders between the complainant and defendant was not approved by SYSTRA/PARSONS office, (which is

represented by Anthony according to the translated letter) which means that the breach was initially made by the complainant in terms of hiding this contract from the authority or its representative, according to the words of the witness.

When and how was hired to supply a specific kind of bolts for the installing of upper stations and what are these bolts specifications?

..... was hired in 2007 or 2008 pursuant to large purchase orders to supply a large quantity of a specific kind of bolts with specified specifications according to the purchase order with a specified bearing force symbolized by the symbol (8.8) in accordance with the British standards. These bolts will be used in linking the station parts together to form the structure of the stations (23) station as a whole to give the outward appearance and force required for the stations to endure and stability to ensure its proper performance over time.

H. The witness acknowledged that the contract made between the parties through purchase orders. So did he acquire the approval these contracts from SYSTRA/PARSONS office on behalf of the authority? He also did not answer the question of specifications, only that it was according the British standards and had the mark 8.8.

Q. Has a neutral party been appointed to examine the bolts to ensure whether it conforms to the specifications of the purchase orders or not in accordance to the quantities supplied by?

The answer: yes, since the beginning of our contract with roads and transport authority, a neutral party was appointed to examine the bolts and ensure its conformity to the required specifications. That party is

I. We pointed out to these tests and we saw the need for the complainant to show them.

Q. Did you send a sample from the first order supplied to you from during executing Dubai metro project?

The answer: yes, we sent a sample to that party to examine it and to check whether it conforms to the required specification or not. The report came from

that neutral party which is indicating that this sample conforms to the specifications required in the purchase orders. Therefore, we sent our supplied quantities to the stations to be installed and they kept supplying the quantities in accordance with the purchase orders sent by us. Thereafter, breached the terms of the contract signed between them and us.

J. What is required, in accordance with the approved specifications of the consultant is to examine each sample before supplying it and in case it passed the examination, the bolt was approved.

Q. Did you take samples from the bolts installed in these stations and samples from the bolts put in your receivership and supplied to you by and send it to to ensure whether it conforms to the specifications required in the purchase orders or not?

The answer: yes. Pursuant to that, we stopped sending purchase orders to them and as a precautionary measure, we put the already existing bolts in receivership, which, was previously supplied to us by We sent samples of the bolts taken from these stations after its disengagement from its place of installing and another sample of the bolts put in receivership, which was not yet installed, to We received the report which indicated that these bolts do not conform to the specification mentioned in the purchase orders

K. Have the sample been taken in the presence of the authority staff and the consultant or only in the presence of the complainant. The witness acknowledges that there has been a mix of samples. The samples used was mixed with the samples unused and sent to the laboratory. The matter to which the examination reports did not refer.

..... **(document 1089)**

He is the manager of Dubai Metro Red Line project, an employee working for the roads and transport authority who supervises the management of executing the Dubai Metro Project. We will mention some important excerpts of the testimony of for the purpose of clarification.

Q. what will you testify?

The answer: what I remember is that during the year 2008 and while I was working as the manager of Dubai Metro Red Line project for the roads and transport authority, engineer told me that he checked a station from the upper stations to examine the progress of work. And that he had suspicions about the bolts installed in that station and whether it conforms to the specification agreed upon with the supplying company or not. Therefore, he notified the consultant "SYSTRA/PARSONS". Later, we knew that the consultant took a sample from these bolts to examine it, this test showed that these bolts does not conform to the specifications agreed upon and so he stopped dealing with

L. It is noted that the consultant examined the samples and then he stopped directly the adoption of the defendant. The technical and administrative basis for the project is that the consultant held the contractor (Complainant) accountable which carry out the proceeding according to the contract between the two parties. But we see that this act covers an error done by the consultant and contractor (the complainant) in their violation of the specifications provided for the defendant and that the two wanted to get rid of responsibility and blame the defendant for it.

Q. Do you have any idea what are the specifications agreed upon with for supplying of the bolts of the upper stations?

The answer: you can ask one of the company's representatives which is agreed upon with the roads and transport authority or the supervising consultant over the project.

B. The witness could not answer the prosecution's question in regard of the specifications and asked for the consultant. This is strange from a technical point of view. How could it be that he is able to distinguish whether the bolts are conforming to the specifications or not during his examination according to his testimony when he does not know the specifications?

..... (document 1098)

He is an essential engineer in rail agency, which is a subsidiary of the roads and transport authority in Dubai. He is the first person to notice the error in the bolts

according to his testimony and the others. We will mention some important excerpts of his testimony for the purpose of clarification.

The answer: What I remember is in June 2008 that while I working as an engineer in the quality unit in the department of quality, safety and environment in rail agency, which is a subsidiary of the roads and transport authority, on a site visit to the financial center upper station of Dubai metro to supervise the progress of work and while I was examining the station I noticed that the installed bolts in the upper station have some marks of rust and corrosion. Then I asked the supervisor of installing bolts used, he showed me a wooden box that contained a quantity of these bolts. By examining these bolts, I noticed that there are holes in it and lacks the company's stamp. Therefore, I prepared a report and submitted it to my direct boss in accordance with the procedures taken in such cases. I also sent an email to the project consultant SYSTRA/PARSONS and told him of the matter to take necessary procedures in such cases. Afterwards, a representative of the consultant and a representative of the contractor arrived and took samples from these bolts from that station. I moved along them to Emirates Airline Station as I remember and they took samples from the bolts for examination to check whether it conforms to the specifications agreed upon or not. Afterwards, I knew from the management that the bolts do not conform to the required specifications.

A. The witness explained that the beginning of the discovery of the subject of dispute was during the examination of the Financial Center station.

B. The witness pointed out to the matter of rust, which related to the galvanization and the method of its specification and the change of the specification by the complainant contractor. As for the presence of holes in the bolts, no such thing was mentioned in company report and got confused by the stations; the defendant did not supply the Emirates Airline Station with bolts.

Q. Do you have any idea what are the specifications agreed upon with for supplying of the bolts of the upper stations?

The answer: you can ask one of the company's representatives who are agreed upon with the roads and transport authority or the supervising consultant over

the project.

C. The witness could not answer the prosecution's question in regard of the specifications and asked for the consultant. This is strange from a technical point of view. How could it be that he is able to distinguish whether the bolts are conforming to the specifications or not during his examination according to his testimony when he does not know the specifications? He did not even bother himself to search for the specifications. How can he be a quality engineer and he does not know the required specifications in a problem that he claimed to discover.

Q. during your time as a quality engineer in the rail agency, did you make field visits to the sites of Dubai metro project and had some suspicions concerning any of the used materials in installing?

The answer: yes, I had suspicions in one of my field visits about some of the bolts installed and the others prepared to be used in the financial center upper station as its apparent shape indicated the presence of are in it.

Q. How did you find out that the shape of bolts installed in the financial center upper station indicates the presence of errors and which rose your suspicions?

The answer: on a site visit to the financial center upper station of Dubai metro to supervise the progress of work and while I was examining the station I noticed that the installed bolts in the upper station have some marks of rust and corrosion. Then I asked the supervisor (cannot remember his name now) of installing bolts used, he showed me a wooden box that contained a quantity of these bolts. By examining these bolts, I noticed that there are holes in it and lacks the company's stamp. That raised my suspicions about these bolts violation of the specifications agreed upon.

D. The witness confirms that upon visual examination it can be known whether these bolts bear the stamp or not and that the rust and holes can be seen by eyes. The question is how a contractor who is an expert in his field for a century is not able to distinguish between the stamped bolts from others or rust resistance from others.

Q. what is the result of the sample testing taken from those stations?

The answer: as far as I know, some of them did not conform to the agreed

specifications.

E. The witness did not specify whether the sample taken from the defendant bolts or not. He also did not explain if the sample was taken in the presence of the defendant or otherwise. This matter is a critical issue because there are bolts supplied by others.

The witness Benedict Avrbun (1130)

He is a construction manager in Obayashi Corporation, which is the partner of the Turkish company as mentioned earlier.

Q. What will you testify?

The answer: What I remember is that during the year 2008 and while I was working as a construction manager in Obayashi Corporation, I got a telephone from the project manager called who informed me that the workers and especially in the financial center station of Dubai metro discovered that the bolts installed in the station have some rust and corrosion marks on them. Moreover, they also noticed these bolts do not have the AB mark. They took a sample and examined it and it showed to violate the specifications agreed upon with the supplying company. Therefore, The company communicated with the supplying company for replacement of these bolts.

F. This testimony is contrary to the testimonies of the employees of roads and transport authority of Dubai. As it is known that, the employees of roads and transport authority of Dubai were the ones who discovered the rust and the lack of stamp and not the Complainant's employees. Since if, his testimony was true, his workers would not have installed the bolts without stamp. It was proven that the bolts with no stamp were confirmed by the Complainant.

Q. Do you have any idea what are the specifications agreed upon with for supplying of the bolts of the Dubai metro?

The answer: I think that the agreed specifications hold the British AB mark and have some certain specifications and for more details, you can ask the project manager called

G. This indeed is a strange answer, as he does not know the required specifications and refers to the consultant to answer for the specifications question. This confirms the findings that the contractor did not comply with the required specifications issued by the consultant because he does not know the actual specifications.

Q. you mentioned that the person called the project manager informed you that they discovered rust marks on the bolts installed in Dubai financial center metro station, so did you moved to the site and examined the bolts installed and its condition to confirm this matter?

The answer: the person called the project manager informed later after the discovery of the matter that they found some rust marks on the bolts installed in Dubai financial center station and that they examined it in a laboratory and asked the supplying company to replace it. They did not inform me of that matter upon discovery, which is why I did not move to the site for examination.

H. this confirms that those who reported the discovery of rust marks are the employees of the authority and not the Complainant's employees because the employees and workers of the Complainant are the ones who installed it.

..... **(1135)**

He is a construction manager in Obayashi Corporation and a supervisor over work in the stations in case of dispute. We will mention excerpts from his testimony for the purpose of clarification.

The answer: what I remember is that during the year 2008 and while I was working as a construction manager in Obayashi Corporation and a supervisor over the work in Dubai metro stations which are the financial center station, Business Bay Station, Ibn Battuta Station and Energy Metro Station. I received an email that indicated to examine the bolts installed in the stations to check if it have rust and corrosion marks and if it holds the commercial mark with the (8.8) symbol. Therefore, I moved to these 4 sites along with engineers and we examined the installed bolts and what is prepared to for installation. We noticed the presence of rust and corrosion marks and that it do not have the commercial mark stamp with the symbol (8.8). Some of these bolts are different entirely from the agreed

specifications. Therefore, we numbered the total number of bolts in the four stations, prepared a technical report, and submitted it to the roads and transport authority to take the necessary procedures. Thereafter, we hired another company and installed bolts that conform to the specifications.

A. The witness acknowledged that the bolts that did not carry the stamp were installed and some of them were being installed as they noted also the marks of rust on them and nevertheless continued in installing.

Q. What is the nature of your work as a construction manager in Obayashi Corporation?

The answer: The nature of my work as a construction manager is to install iron basis of the metro stations structure and to guide the workers through making site visits and examining the progress of works executed to ensure the conformity of the used materials to the agreed specifications.

Q. Do you have any idea what are the specifications agreed upon with for supplying of the bolts of the Dubai metro?

The answer: as I remember the agreed specifications were that the bolts are able to withstand a force of (8.8) to hold the commercial stamp AB mark and to be rust and corrosion proof.

B. even though it is from his duties to conform the works to the specifications agreed upon, he did not discover things that can be seen by the naked eye and he knows the nature of the specifications including the stamp.

The answer: Therefore, we numbered the total number of bolts in the four stations, prepared a technical report, and submitted it to the roads and transport authority to take the necessary procedures. Thereafter, we hired another company and installed bolts that conform to the specifications.

C. Why did not he bring it to the roads authority as he follows the consultant administratively? The consultant should have taken a procedure against the contractor and not against the supplier to achieve in the first place whether the

contractor complied with the specifications or not, which is an attempt to cover the error made by the consultant and the contractor.

Conclusion:

We can conclude several important points from the witnesses' testimonies that show what really happened as follows:

1. We can be certain that through field examination of the roads and transport authority's employees it was clear that there is no stamp on some bolts and the presence of rust marks on others. **However, the source of these bolts was not technically identified whether it came from the defendant or from others.** These traits lead to the emergence of the dispute.
2. The employees of the authority are the ones who discovered these errors and not the consultant or the complainant (the contractor).
3. The discovery was after a long time from installing the bolts.
4. The complainant's employees and despite their long experience in this industry were not aware of the required specifications.
5. We noticed error covering by the consultant and the contractor (the complainant) which they made due to the incorrect specification of materials and not discovering the error despite its clarity and their endeavor to link between the authority and the defendant directly which is not correct in our opinion.
6. It is evident that there is confusion in the quality of the bolts that violates the specifications between the defendant's bolts and other suppliers' bolts. In addition, to the right of the defendant to verify whether or not these bolts belong to it or to other suppliers.
7. It is clear that the stamp was irrelevant for the complainant as it is clearly obvious without the need for laboratory to find out.

8. The sample taking mechanism and sending it for examination in the laboratory was not done in according to the agreed specifications or proper engineering work as the defendant should have been present.

9. We did not notice from all of the statements of witnesses that the consultant blamed the contractor (the complainant) for this error due to lack of proper specification.

Seventhly: analysis of laboratory director testimony (1186, 256):

Due to the importance of the laboratory director "....." testimony, we allocate a special for him. The most important statements mentioned in his testimony:

Q. As an expert working in Lab in examining metals, the samples test certificates of the bolts subject of dispute were issued for the ongoing investigation, so what is the content of these certificates?

The answer: I would like to refer that I was informed to return to the public persecution as an expert in examining metals and was provided with five copies of test certificates issues by the lab in relation to the bolts examination. I have to look into these papers thoroughly and then compare it to the special specifications of the bolts that have been agreed upon between the defendant and the complainant. In addition, to reach the truth in relation to whether these test samples applies to what have been agreed upon in the agreement provisions or not and then finally write a technical detailed report with the final result.

9. The opinions mentioned below in this report were issued according to what have come to my knowledge and believe and in accordance with the comparison of the actual tests' results recorded by the attachments in appendix (A) against the requirements and specifications of the test according to what JTM-JV has provided to at that time.

1. It is noted that he acknowledged the right way to make the test that is the comparison between what have been agreed upon of specification and the test results. However, he did not get the specifications agreed upon and rather

depended on what the complainant provided him with of specifications without referring to it in the report. In the second testimony, the witness mentioned that he compared the results against the requirements and specifications of the project in accordance with what the Complainant Company delivered to the laboratory. This means that he has not been briefed with the specifications agreed upon between the two parties and on which basis examination has been conducted.

12. And I was told that the components mentioned above were chosen by JTM-JV and afterwards were supplied to I also was notified that JTM-JV company issued a local purchase order for each of the components mentioned with clear written instructions listed in the reservation order for - which indicated the conduct of tensile section test, proof load tests (for nuts), the outer layer thickness tests, durability and chemical composition tests (see appendix B)

13. The components have been randomly chosen by JTM-JV and delivered directly to The urgent need for testing, specifically, for testing results is due to enable JTM-JV to determine whether the tested components have been manufactured according to ISO standards and specifications for testing (ISO 898-1, BS EN ISO 1461 – 09, ISO 898-2). had no role in choosing the components which will be tested or any obligation regarding verifying and assuring the country of origin for these components.

2. The witness acknowledged that the samples have been delivered to him by the complainant and he did not check whether the defendant knows about these samples and whether it is attributed to her or not as the report has no reference to this, and that the laboratory had no role in choosing the samples or in verifying whether it was used or was new.

17. According to the nature of these measures, JMT- JV reserves the right to assess test certificates and to determine whether or not the results are acceptable and subject to its contractual requirements under the main contract for the works of Dubai Metro.

3. The laboratory director assures that the right measure is to compare the test results to the agreed specifications.

27. Note 3 the percentage for acceptance or failure shows (60) out of (63) potential samples submitted for testing. The results were approved for the purposes of knowledge only without detailed acceptance criteria attached to the certificates. Acceptance criteria according to ISO specifications BS EN ISO 1461-09: schedule 4 is 50 microns (in average). JMT- JV did not require measurements of outer layer thickness to be written on certificate No DB01113 ISS.1.

4. It is noted that the complainant did not ask for measuring the thickness of the outer layer because it will reveal defect in the characterization given by her on adopting electro galvanization.

31. Based on the number of samples tested and reviewed against required specifications, we find out acceptance rate of 50%.

5. This acceptance rate does not specify whether all bolts are attributed to the defendant or to others as we will note later in our comment on test results.

22. This was done in the form of written instructions and it was noted in the Five Local Purchase Orders that the laboratory did not receive any number of alloys/ nails or (manufacturing Test certificates) which show the origin of manufacturing. As the supply process was not international, it is not common to receive such information from the customers who intend to verify test results by means of the original manufacturer.

6. The witness assures that he does not know who manufactured these bolts whether it is the defendant or somebody else.

Conclusion:

Several important points can be concluded from the testimony of the laboratory director which illustrate what really happened as follows:

1. The laboratory neither checked whether all bolts are attributed to the defendant nor did he chosen the sample.
2. The 50% per cent failure rate does not necessary mean that 50% of the bolts attributed to the defendant had failed.
3. The complainant avoided corrosion resistance inspection due to her change of the specifications from dipped galvanization to electro galvanization.

Eight: analyzing the letter of the quality officer of the compliant (543):

Given the importance of this letter in understanding the nature of dispute and being a key element we find it better to dedicate a separate chapter for it for inspection and analysis as follows:

Nyan Tun
From:
Sent: Monday, June 30, 2008 1:58 PM
To:; Beech Trevor
Cc: Greg Fogarty; Mike Black; Nyan Tun; Rey Lamson; Jerwin Adrados; Nobuo Konta; Isao Hsis; Yoji Hiraoka
Subject: BOLTS

Importance: high

Dear/ trevor,

The issue was discussed again with Tony Burchell, at today's quality meeting where he insists on receiving our full report within this week.

I advised this would be the NCR report& that we were testing, so likely it would be next week before submission. He however insists we submit within this week& can submit test results later once available.

Basically I advised that all bolts not belonging to were being removed from site (they question whether all will be), we would then have a quantum for replacement & would audit the factory when these were being produced.

He acknowledged this as a reasonable preventive measure, but wants the full preventative actions to cover:

Why orders were changed from Hot Dip to electro plated..... He considers possible disciplinary action should be considered if deliberately ordering wrong materials.

Why bolts received not from or having AB mark as approved supplier.

Why no materials inspections conducted on receipt that may have detected problem.

How to stop above again?

On similar issue, another (new to me) engineer/RTA confirmed being unclear on bolts from Sufadari (?) where they have noted some stamped (SU) and some stamped "CM"..... they wish to clarify on these stamps..... IS it possible to get testimony for the supplier?

AS for nonconformance report, i suggested holding a short meeting with people

involved in Business Bay to confirm response to nonconformance report.

.....

Project manager- quality assurance and control

Dubai Metro Project

JT metro JV, Ittihad Square

PO Box No., Dubai, UAE

Telephone: +.....

Fax: +.....

Mobile: +.....

Email address:@.....

This letter is dated on June 30 sent from complaint's director (for quality) to (the witness).

The letter is very important and in which exist the following facts:

1. The letter refers to the problems related to bolts.
2. The letter is entitled as being of high importance.
3. The letter is issued by complaint's quality employee.
4. The letter indicates that it was sent after meeting the consultant represented by Tony Burchell.

5. The letter indicates that the complainant installed the bolts for inspection and she is preparing for NCR.

6. The employee says "I advised that all non-..... were being removed from the site" which means that this is a clear and explicit acknowledgment that:

- a. Bolts from other companies have been used.
- b. The bolts related to Company have not been dislodged.
- c. After dislodging, the bolts will be counted for replacement which means that the replacement does not relate to the bolts from Company.
- d. After manufacturing, inspection will be conducted in the factory.
- e. The consultant admitted that this measure is sufficient and acceptable in order for this defect not to be repeated. This means that he did not request to remove the bolts from Company.
- f. But the consultant requested making a comprehensive mechanism for non-repetition includes:
 1. Find an answer to the question why the requirements for bolts were changed from Hot Dip to Electroplated galvanization in respect of the process of protection from corrosion.
 2. The complainant reported that the consultant will examine the possibility of issuing a penalty in case this mistake in requesting materials was intended.
 3. Find an answer to the question why other bolts not from Company were supplied or does not have (AB) mark on them as Company is agreed upon.

4. Find an answer to the question why there was no inspection conducted for the materials while supplying in order to detect the problem.

5. Find an answer to the question how to prevent the repetition of the problem.

7. The letter also adds that a new thing was noted to which the RTA employee has recently referred that is some bolts are stamped with SU and other with Cm and he requested clarification for this.

8. This letter affirms the involving of two other factories and that some bolts are stamped with other two different marks.

9. In addition, the letter suggests that RTA has not approved two other factories save Company, however the complainant has imported bolts from two other non- approved factories and this requires inquiry from RTA about the supply companies approved by it for supplying bolts and whether the complaints manipulated the approvals.

10. The letter also confirms it was the RTA's employee who followed the issue not the complaint's which casts doubt on the validity of testimony in front of prosecutor in that it is he who discovered the existence of the defect.

11. The letter further confirms that the bolts sent to included bolts from two other factories rather than Company.

Conclusion:

Many significant points could be concluded from the letter sent by the complaint's quality manager, which clarify what has really happened, they are as follows:

1. That the complainant has installed bolts not approved by the consultant and belonging to two other companies rather than the defendant's and these are the bolts which failed.

2. That the consultant has not requested the bolts belonging to the defendant to be initially removed.

3. That the consultant and the complainant both assured that the complainant has changed the specifications of galvanization without the consent of the consultant, and that the consultant will examine the possibility of imposing penalty on her.

4. The 50% per cent failure rate does not necessary mean that 50% of the bolts belonging to the defendant has failed.

5. The complainant avoided corrosion resistance inspection due to her change of the specifications from Hot Dip to Electroplated galvanization.

6. That the letter confirms that among the bolts sent to the laboratory there were other bolts belonging to different companies rather than the defendant's.

Ninth: Analyzing some other letters:

1. A letter sent from the manager of the consultant, Mr. 662.

This letter was sent a day before the one mentioned above dated on 06/29/2008.

The content of the letter is about corrosion resistance in respect of the bolts manufactured by Company. And what is strange is that the consultant withdrew all previous approvals that might have been given to Company and ordered all bolts imported and installed by the compliant to be removed. While it supposed that the consultant hold the contractor responsible instead of intervening in the supplier only because of something related to bolts, we can hardly find any rebuke to the Contractor (the Complaint) or holding her responsible Which casts doubt on the mechanism with which the bolts have been approved and the specification has been changed as to being responsible

for the corrosion or not? However the next letter refers to removing bolts from two other factories not from Company.

2. Letter regarding requesting approval for adopting bolts from Company 677.

The Contractor requested the Consultant to give approval to the company for supplying bolts in accordance with the required measurements and the consultant approved the request on 03/07/2007 on a SONO basis that is the lowest degree of approval and means a conditional approval one by one subject to the submitted documents in due course. The approval along with its documents submitted by the supplier to the Contractor is based on the price and the required specifications in due course and supply date. As the documents delivered by the supplier show his ability to produce the materials in accordance with the required specifications. The specifications under which the supply is to be done are subject to the purchase orders and the terms stated therein between both parties.

Conclusion:

Many significant points could be concluded from the letter sent by the complaint's quality manager, which clarify what has really happened, they are as follows:

1. What is strange is that the consultant has taken procedure against the Defendant but has not taken any against the Complainant although it was the Complainant who changed the specifications related to corrosion resistance and installed bolts without stamps as well.
2. The consultant has given conditional approval to the Complainant Contractor for using bolts supplied by the Defendant pursuant to inspection for each set but the Complainant did not comply with this requirement.

Tenth: Analyzing laboratory report (882,627-641):

Since the beginning of the complainant was based on test certificates issued by, a thorough technical analysis was necessary to find out the reason behind this dispute and its basis which was the subject of dispute over the years. By our inspection of the details contained in these certificates, we find it strange the absence of basic facts from the public persecutor knowledge. These facts were not carefully inspected by the public persecutor and all went behind them what shows to us that they contain great chicanery affecting the basis on which the Compliant stood in her complaint. She used the results of these certificates in an excessive way without us knowing the intention behind it and left the court to conclude the intention beyond this excessiveness and modulating of realities.

The laboratory has issued several certificates regarding bolts some of which related to the Complainant and the rest related to other companies that have nothing in this dispute (document 642-653), and inserted copies of these certificates in this lawsuit to indicate the magnitude of the defendant defect.

And where it is our nature that we do not exaggerate in our reports to show our position as if we defend the report applicant, but in this lawsuit we have seen the wonder (through the documents) from the complaint, specially the passing of the lawsuit in front of the prosecutor and its reliance on this number of witnesses without incurring itself the trouble of technical search in the test certificates to find out the defect.

Strangely, the number of test certificates issued by the laboratory is five out of which four certificates are not relevant to the defendant this means that 90 % of these certificates and its results has no relation with the defendant. The remaining certificate is about just two types of bolts as will be indicated in the following schedule. As for the first type just three bolts were supplied at a value of 39 AED. As for the second an amount of bolts worth 10644 AED out of the contract total value of 231958 AED based on payment bills was

supplied. This means that the percentage of supplied bolts does not exceed 4.5%. Further as regarding the laboratory claim that the sample has failed in the tensile test, the laboratory declared in a notice (628-629) that it is technically unqualified for conducting this kind of tests in accordance with British Accreditation Council which adopt British specifications as the basis of its work. The laboratory, in addition, did not specify whether the whole sample is of the Defendant bolts or belongs to others which means the test certificates along with its results are all nothing in this dispute. I find nothing in all that exerted effort it trying to prove defect on the part of the Defendant but an explicit kind of wasting the precious time of the public prosecutor and the court.

1. It is turned out from reviewing the measurements of bolts in the bills, purchase orders, and in the Defendant invoices then comparing them with test certificates that, pages 632, 636 and 641 do not relate to the Defendant in any way.

2. It is turned out from reviewing the measurements of bolts in the bills, purchase orders, and then comparing them with test certificates that, test certificates pages 647 and 653 both contain two types of samples, the first does not belong to the Defendant in any way, while in the second the measurements of the sample has not been determined making both certificates technically invalid for taking them as evidence because of the possibility of being belonging to other suppliers.

3. As for certificate page No 629 it shows that the samples were according to the following measurements:

a. M30X110 three bolts, one nut, and one shower. However there is no purchase order was issued regarding bolts of these measurements; an invoice page 374 was issued by these specifications.

b. M30X120 three bolts, two nuts, and two showers. A purchase order and invoice were issued by these specifications.

Schedule (4)

Certificate No	Samples specifications under test certificates by the lab	Source of samples	Document	Samples specifications under Defendant's invoices (as for the bolts)	Total No of materials in the invoice	value	Document
801195	Bolts M30X110 Mm	Teacom	629	Nothing	1072	13305.62	351
	Bolts M30X120 mm			Bolts M30X90 mm	134	1407	352
801213	Bolts M30180 mm	Jebel Ali	632	Nothing	500	1250	353
	Bolts M30X150 mm			Bolts M30X90 mm & Bolts M30X130 Mm	624	2563.97	354
	Bolts M24X120 mm			Bolts M20X70 mm & Bolts M24X80	8100	9999.97	355
	Bolts M20X120 mm			Bolts M20X70 mm & Bolts M20X100 Mm	10584	12136.4	356

801645	Bolts M10X55 mm		636	Bolts M20X80 mm & Bolts M24X105 mm	3888	7550.3	357
	Bolts M16X60			Bolts M20X80 mm	11760	20776	358
	Bolts M16X80 mm			Bolts M30X90 mm	3498	12243	359
	Bolts M24X140 mm			Bolts M30X130 mm	3024	14616	360
	Bolts M30X140 mm			Bolts M20X70 mm	10500	11550	361
801347	Bolts M10X55 mm	Trade Center	641	Bolts M30X130 mm	1746	8439	362
	Bolts M20X130 mm			Bolts M30X130 mm	1674	7856.04	363
	Bolts M24X120 mm			Bolts M30X130 mm	1521	7351.5	364
	Bolts M30X150 mm			Bolts M30X130 mm	3000	14449.97	365
	Bolts M30X180 mm			Bolts M30X90 mm	3351	11728.5	366
	Bolts M16X80 mm			Bolts M30X90 mm	3540	12390	367
	Bolts M30X150 mm			Bolts M30X90 mm	2700	9450	368
	Bolts M20X130 mm			Bolts M30X110 mm	9	39	369
	Bolts M20X150 mm			Bolts M30X130 mm	726	3509	370
	Bolts M20X130 mm			Bolts M30X130 mm	1530	7395	371
801113	Bolts M16X70 mm		895	Bolts M30X130 mm	1200	5800	372

	Bolts M20X80 mm			Bolts M30X130 mm	1020	4930	373
	Bolts M20X90 mm			Bolts M30X130 mm & Bolts M30X110 mm	3111	14201	374
	Bolts M20X110 mm			Bolts M30X120 mm	2550	10644.03	375
	Bolts M24X120 Mm			Bolts M30X120 mm	480	2160	376
	Bolts M24X140 mm			Bolts M20X85 mm & Bolts M20X70 mm	3010	4217	377
	Bolts M30X140				84852	231958.3	Total

Further the following schedule shows a comparison between the total requested sets by the Complaints which provided in the purchase orders to the total sets supplied according to the invoices issued by the Defendant. It is turned out that the materials supplied are more than that requested and less in value which indicates the occurrence of many changes in the daily reality between the two parties. This schedule also shows that the amount of supplied materials by the manufacturer to the Complainant does not exceed 0.16% of the total product, that is the manufacturer itself was not relying on the project despite his interest in the government customers who represents the majority of his customers.

Schedule (5)

Total requested sets by the Complainant provided in the purchase orders	value	Document	Total number of sets under invoice	Value	Document
358	13305.7	378	1072	13305.62	351
15648	28326.3	379	134	1407	352
1500	1250	380	500	1250	353
3528	12136.4	381	624	2563.97	354
8100	10000	382	8100	9999.97	355
3500	11550	383	10584	12136.4	356
3900	13650	384	3888	7550.3	357
7170	29500	385	11760	20776	358
7170	29500	386	3498	12243	359
5700	23900	387	3024	14616	360
3750	18125	388	10500	11550	361
3750	18125	389	1746	8439	362
3600	16400	390	1674	7856.04	363
8706	23300	391	1521	7351.5	364
76380	249068.4		3000	14449.97	365
			3351	11728.5	366
			3540	12390	367
			9450	2700	368
			9	39	369
			726	3509	370
			1530	7395	371
			1200	5800	372
			1020	4930	373
			3111	14201	374
			2550	10644.03	375
			480	2160	376
			3010	4217	377
			84852	231958.3	
		No of sets produce by	52,402,745		0.16%

		the manufacturer			
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Schedule (6)

Place of supply (as to purchase orders)	Value	Document No	corrosion resistance description (review bills (354-380) & price list)	Type	No of pieces
Teacom	16400	389	Electroplated except for nuts as it is Hot Dipped	GR 8.8	1200
Algarhood	23300	390	Electroplated except for as it is Hot Dipped	GR 8.8	2292
Mall of Emirates	18125	387	Electroplated except for as it is Hot Dipped	GR 8.8	1250
Financial city	18125	388	Electroplated except for as it is Hot Dipped	GR 8.8	1250
Burj Dubai	29500	384	Electroplated except for as it is Hot Dipped	GR 8.8	2390
Emirates Towers	29500	385	Electroplated except for as it is Hot Dipped	GR 8.8	2390

Alkarama	23900	386	Electroplated except for as it is Hot Dipped	GR 8.8	1900
Emirates Towers	11550	382	Electroplated except for as it is Hot Dipped	GR 8.8	3500
Financial city	13650	383	Electroplated except for as it is Hot Dipped	GR 8.8	1300
Financial city/ Mall of Emirates	10000	380	Electroplated except for as it is Hot Dipped	GR 8.8	2700
Burj Dubai	28326.3	378	Electroplated except for as it is Hot Dipped	Not Hex Bolts	
Marina/ Jumaira	1250	379	Electroplated except for as it is Hot Dipped	Not Hex Bolts	
Burj Dubai	12136.4	380	Electroplated except for as it is Hot Dipped	Not Gr 8.8	3528
Emirates Towers	13305.7	377	Electroplated except for as it is Hot Dipped	Not Hex Bolts	
Total	232668.4			Total	9882
				Total	9090

4. It is clear that failure and success rate in respect of the tests done by the laboratory and as to the testimony of the laboratory director in front of the prosecutor, that the laboratory director has added the samples belonging to Company, which were supplied under one certificate, to the big number of other samples belonging to other suppliers as we proved above to reveal high rate of failure. At the time it referred to the existence of success rate of 50%, the laboratory however, because of its failure in specifying the samples precisely, it is resulted from our analysis that the samples passed the test might be of the Defendant not from other companies and it cannot prove the contrary.

5. As we explained above, the certificates from page 642 to 653 belong to Yongnam Engineering and Construction Co. and we do not have any idea about the relation of this company with the dispute. We also do not know whether the requests of this company are as the same as the complainant company to the laboratory in respect of testing standards.

6. It was proven to us that the laboratory has not been provided with the specifications agreed upon by both disputing parties on which it based the tests.

7. It was proven to us that the tests have been done on samples some of which was disassembled from the site and that the certificates did not determine within the assessment of the samples what is new and what was used which undoubtedly affects testing results.

8. ISO Specification 898-1:199 determines that these specifications do not apply to bolts requirements for corrosion resistance (page 1329) what raises the inquiry as to using test results to come up with that the supplied bolts are not corrosion-resistant. The Compliant had to find another mechanism to examine bolts in order to determine their degree of corrosion resistance instead of relying on testing mechanism adopted by the laboratory. Assuming that there exist a corrosion resistance specification claimed by the Compliant, but we however, find that the

Complainant has changed the specifications in many of the purchase orders to allege that the bolts bear less degree of corrosion resistance what surprised the consultant making him demand investigation into the matter.

9. General observations on test certificates

(Document 636- Shall be 635)

Specification - Client Requirement

a. It is noted that the laboratory certificate includes a column for required specifications but it was inserted (according to the demand of the client without defining the specifications.)

(Document 829- Shall be 631)

Test Certificate	
JT metro JV	REF No D801213 : Issue 1
P.O. Box 182845	Ord No Reqn.Dated 27/07/08
Dubai	
U.A.E	Date Tested 12/08/08
182845	Date Reported 12/08/08
	Date Received 27/07/08
- Various sizes bolts, nuts and washers	

Client Ref: R27 – Jebel Ali Industrial Station

Item 1: M30×180mm Bolt, Nut, Washer – 3 sets; HM: NLM

Item 2: M30×150mm Bolt, Nut and Washer – 3 sets; HM: SFC

Item 3: M24×120mm Bolt, Nut and Washer – 3 sets; HM: 8.8

Item 4: M20×120mm Bolt, Nut, Washer – 3 sets; HM: 8.8

Each set 1 Bolt, 1 Nut and 1 Washer

Bolts Grade: 8.8; Nuts Grade: 8

Specification - Client Requirement

Note that these bolts have been supplied from Jebel Ali which is not amongst the stations to which Company supplies its bolts. This means that there occurred an error in the examination certificates by the laboratory and built the accusation on examination certificates have no relation with the bolts from Company. Also the Client Ref is R27 not

(Document 884-~~Shall be 882~~)

Test Certificate

INVOICED

JT metro JV

REF No D801645 : Issue 1

P.O. Box 182845

Ord No Reqn.Dated 16/09/08

Dubai

U.A.E

Date Tested

08/10/08

182845

Date Reported

14/10/08

Item - Various sizes bolts, nuts and washers – 5 Items

ITEM DESCRIPTION:

Item 1: M10×55mm – 2 sets; Bolts: HS 8.8; Nuts: SI8I

Item 2: M16×60mm – 2 sets; Bolts: M/TMS 8.8; Nuts: HXI8I

Item 3: M16×80mm - 2 sets; Bolts: PC 8.8; Nuts: HXI8I

Item 4: M24×140mm- 2 sets; Bolts: SM 8.8; Nuts: 10

Item 5: M30×140mm - 2 sets; Bolts: NL/M 8.8; Nuts: No mark

Each set 1 bolt, 1 nut and 1 washer

Grade: Bolts-8.8; Nuts-8

Specification - Client Requirement

Note that there is no indication to Client Ref

(Document 895-**Shall be 892**)

Test Certificate

JT metro JV	REF No	D801113	: Issue 1
P.O. Box 182845	Ord No	Reqn.Dated	09/07/08
Dubai			
U.A.E	Date Tested		29/07/08
182845	Date Reported		04/08/08
	Date Received		09/07/08
Item - Various sizes Bolts, Nuts			
Total: 20 No.; Client Ref: Bolts			
Identification:			
Item 1: M16×70mm – 3 Nos. Bolt: AB 8.8; Nut: XH I8I			
Item 2: M20×80mm – 2 Nos. Bolt: AB 8.8; Nut: XH 8			
Item 3: M20×90mm – 3 Nos. Bolt: AB 8.8; Nut: S 8			
Item 4: M20×110mm – 3 Nos. Bolt: AB 8.8; Nut: XH I8I			
Item 5: M24×120mm – 3 Nos. Bolt: AB 8.8; Nut: SC I8I			
Item 6: M24×140mm – 3 Nos. Bolt: AB 8.8; Nut: 10_2Nos; SI8I_ 1 No.			
Item 7: M30×140mm – 3 Nos. Bolt: AB 8.8; Nut: 8			
Specification - Client Requirement			

Note that these bolts do not belong to based on the samples analyzed in the above schedule; however the report mentioned that they belong to (the Defendant).

(Documents 889 and 890- Shall be 894 and 895)

Tensile Test – ISO 898-1:92

Load Test – ISO 898-2:92

Tests marked 1 are not included within the scope of our UKAS

The laboratory mentioned that it is technically unqualified for doing tensile test

Conclusion:

Many important points could be derived from our analysis to laboratory report as follows:

1. Technically the laboratory certificates in respect of the Defendant are nothing as it has been proven throughout the acknowledgement of the laboratory that the laboratory itself is technically not qualified for conducting these tests according to United Kingdom Accreditation Service which works according to the British specifications with regard to this dispute.

2. Four certificates out of five issued by the laboratory for the Compliant have nothing to do with the Defendant, rather they are related to other companies.

3. The only certificate issued by the laboratory that relates to the Defendant contains results of only two products out of more than 20 products of the Defendant. And according to payment certificates, one of the two products was supplied to the Complainant in a number of 3 bolts only.

4. We realized that the value of both products is less than 4.5% of the invoices value due to the Defendant on the Complaint.

5. We found out that the laboratory has mixed samples of other companies to that of the Defendant which means that the results might be not relevant to the Defendant.

6. The laboratory acknowledged in the test certificates that the products belong to the Defendant, but we discovered that such acknowledgement was a false one based on payments statement provided by the Complainant to the court with the claims due on the Defendant.

7. We realized that the laboratory has inserted a large number of copies of the certificates which do not belong to the Defendant in this lawsuit to indicate the magnitude defect of the defendant.

8. We realized that the 50% per cent of success and failure decided by the laboratory regarding all samples submitted to it means that test certificates cannot assert that the failure was on the part of the products supplied to the Complainant according to payment certificates.

9. We found out that the laboratory has bucked its proficiency in accepting samples from only one party without checking that the other Party was attend during the process of selecting random samples and the laboratory admitted that it has not participated in that process what eliminates the laboratory's neutrality at all.

10. ISO Specification 898-1:199 determines that these specifications do not apply to bolts requirements for corrosion resistance (page 1329) what raises the inquiry as to using test results to come up with that the supplied bolts are not corrosion- resistant. The Compliant had to find another mechanism to examine bolts in order to determine their degree of

corrosion resistance instead of relying on testing mechanism adopted by the laboratory. Assuming that there exist a corrosion resistance specification claimed by the Compliant, but we however, find that the Complainant has changed the specifications in many of the purchase orders to allege that the bolts bear less degree of corrosion resistance what surprised the consultant making him demand investigation into the matter.

Eleventh: analyzing the allegation of fraud the Defendant is accused of by the public prosecutor:

As the accusation directed to the Defendant by the public prosecutor has included exercising fraud, it requires us to dedicate a separate chapter for this matter as follows:

1. To speak of exercising fraud, we need to recognize what are the goods being the subject of the case. In order to do this, it is necessary to consider these pictures:

(Pic 1)

AB \implies is the sign of the company

8.8 \implies is the sign of the size (Shall be "sign of the Grade")

(Pic 2)

2. The first picture highlights the difference between the stamped and non- stamped bolts. As we previously showed that both litigants are of the owners of most prestigious professions specially, the Compliant as it is a combination of two companies, one of them was incorporated more than one century ago and specialized in the field of contracting and construction of trains while the other incorporated more than half a

century ago in the same field, so it is normal that the worker, the employee, the technician and the engineer all can easily detect the difference from the point of supply to the site. The consultant, in addition, who accepts these products at the site easily examine and recognize them. Moreover, the worker who installs the bolts could simply note the stamps on the bolts and would refuse to install them timely. But what has happened is that the Complainant has installed the bolts which means that the bolts belong to the Defendant were not in contradiction or otherwise the Complainant was supposed to return them back immediately. Consequently, the element of fraud in stamps cannot technically and practically be accepted because of the easiness of detecting the matter as mentioned above.

3. As for the second picture it is about 3 new bolts. The first one is a hot dipped bolt which is the best kind in corrosion resistance. The second bolt is an electroplated bolt and it has the lowest degree of corrosion resistance and is apparently brighter than the first. This kind was almost the bolts agreed upon between both litigants. As for the third kind it is not galvanic plated. Accordingly, it is evident from the pictures that the distinction between the three kinds can easily be done even by an average person, so the distinction therefore should be easier for people of professions and experience. It is important to note that the bills are clear regarding sample specifications and that billing did not made on the basis of Hot Dip.

4. Putting the marks: It is firm that the bolts received by the Complainant from Company each has the stamp (the mark) on it and it was the Complainant duty to return and refuse accepting any bolt that did not have a stamp immediately. Even if these non-stamped bolts belong to the Defendant and the Complainant accepted it without stamps on it, this is

considered an acceptance by it, and as being a large trade company experienced in such works so the assumption that it does not know the difference between the stamped and non-stamped bolts is unacceptable.

Conclusion:

Many important Points could be concluded from our analysis to the issue of fraud and they are as follows:

1. The possibility of existence of fraud if built on three assumptions:
 - a. Fraud in putting the stamps: as we previously proved it is something that is not hidden to an average person so how about people of experience.
 - b. Fraud in the type of galvanic plating for corrosion resistance: It was also proven above that an average person can distinguish between the three kinds with the naked eye upon receipt so how about people of experience. Further the Defendant was clear in its offer and supply and in invoices value as she requested payment of the value for electroplated bolts and not for hot dipped ones.
 - c. Fraud in mechanical properties: with regard to the inability to tensile according the specifications agreed upon. We have proven the invalidity of such tests from a technical point since the laboratory itself is not technically qualified from the United Kingdom Accreditation Service as the laboratory itself admitted in its certificates. In addition, 4 certificates out of 5 have been proven to belong to suppliers other than the Defendant. Also the amount of materials supplied in the remaining single test certificate does not exceed 4.5% of the total materials supplied to the Complainant which means that the laboratory could not assert that these materials

belong to the Defendant. Although the laboratory insisted in one certificate of the four that the materials belong to the Defendant, we proved throughout documents that these materials about which the Defendant has not issued any invoices to the Complainant and this indicates the non-validity of such information by the laboratory, a something that could challenge the laboratory professionalism.

2. It was evidenced that the Defendant has no benefit from fraud in goods whose value do not exceed 12.000 AED and it has clients from government institutions on the state level and in the middle east, and in oil and gas industry and this requires considering the standard specifications precisely.

Twelfth: Dispute details over payment:

It is important at the conclusion of this report to prove the Complainant default in respect of repayment of the Defendant dues and that what caused this case to be raised by the Complainant is the Defendant's demand for its rights to evade from repaying the due liabilities. In brief we cite what we have provided in our main report in respect of payment of dues as follows:

1. Payment mechanism set out in the agreement:

The clauses of the agreement indicates that the payment between the two parties shall- pursuant to order purchases- be on the twentieth day of the month in which the invoice is received when the invoice is submitted to the purchaser before the fifth day of the preceding month. And by looking in the payment dates statement and its value and date of maturity we find that:

1. The Complainant paid an amount of 12.322.47 AED dated on 07/02/2008.
3. The amount due to the Defendant by 07/02/2008 is 116.120.50.

4. The last batch of bolts submitted to the Complainant is dated on 07/02/2008.

5. This means that the Complainant has delayed paying the Defendant dues with an amount of $116.120.50 - 12.322.47 = 103.798.03$ AED till 07/02/2008.

6. Since the Complainant has paid an amount of 12.322.47 AED by 07/02/2008, this means that there was no problem or the problem was limited. Had all the quantity failed, the Complainant would have not paid any amount.

7. The Complainant acknowledged that it paid 77171.25 AED only but did not pay an amount of 147219.70.

No	Type	Invoice	Amount in (AED)
8	Paid	628	1.120.00
9	Paid	1271	4.747.40
10	Paid	1272	4.747.40
11	Paid	1281	12.322.47
12	Paid	1289	13.305.70
13	Paid	1291	16.233.10
14	Paid	2034	5.282.20
Total paid amount			77.171.25

No	Type	Invoice	Amount in (AED)
1	Unpaid	00849	4.217.00
2	Unpaid	00850	2.160.00
3	Unpaid	00851	10.644.00
4	Unpaid	00852	14.201.00
5	Unpaid	00867	5.800.00
6	Unpaid	00888	3.509.00
7	Unpaid	00899	9.450.00
8	Unpaid	00901	11.728.50
9	Unpaid	00910	14.450.00

10	Unpaid	00917	7.351.50
11	Unpaid	00925	7.856.00
12	Unpaid	00967	11.550.00
13	Unpaid	00988	14.616.00
14	Unpaid	01065	7.550.00
15	Unpaid	01070	12.136.40
16	Unpaid	01076	10.000.00
Total unpaid amount			147.219.70

Invoice date	Maturity date	Total amount	
07/05/2008	22/06/2008	4.217.00	
07/05/2008	23/06/2008	2.160.00	
08/05/2008	23/06/2008	10.644.00	
08/05/2008	23/06/2008	14.201.00	
08/05/2008	23/06/2008	4.930.00	
10/05/2008	25/06/2008	5.800.00	
12/05/2008	27/06/2008	7.395.00	
12/05/2008	27/06/2008	3.509.00	
12/05/2008	27/06/2008	39.00	
13/05/2008	28/05/2008	9.450.00	
13/05/2008	28/05/2008	12.390.00	
13/05/2008	28/05/2008	11.728.50	
15/05/2008	30/06/2008	14.450.00	
15/05/2008	30/06/2008	7.351.00	
17/05/2008	02/07/2008	73.856.00	12.322.47 paid on 02/07/2008
20/05/2008	05/07/2008	8.439.00	
21/05/2008	06/07/2008	11.550.00	
25/05/2008	10/07/2008	14.616.00	
25/05/2008	10/07/2008	12.243.00	
31/05/2008	16/07/2008	206.00 the Complaint	

01/06/2008	17/07/2008	7.550.30	
01/06/2008	17/07/2008	12.136.40	
02/06/2008	18/07/2008	10.000.00	
05/06/2008	21/07/2008	2.563.96	
08/06/2008	24/07/2008	1.250.00	
25/06/2008	10/08/2008	1.407.00	
02/07/2008	17/08/2008	13.305.62	Letter of apology dated on 09/07/2008

Final conclusion:

Because of the significance of the conclusions under each heading in this report we recommend reviewing them separately. However, we sum up the report as follows:

1. The parties to the dispute are of the specialized traders in their profession over a long period of time and they fully realize all the required specifications for the needed materials subject of this dispute. Since the Compliant is a combination of well-established companies in the field of Contracting and construction of railway projects all over the world. And the complaint's factory is considered one of the large sized factories as to its products in the Middle East as its area is more than 7000 SQM while the total percentage of the sets sold to the Compliant does not exceed 0.16% of the total production.

2. The contractual relation between both patties is based on requesting prices list by the Compliant followed by prices list issued by the Defendant, then purchase orders issued by the Compliant followed by on-site amendments to the orders whether in amount or in specifications or in places and times of supply. After that the Defendant has issued the invoices, and it was proven that

there is a difference between the purchase orders and the actual supply in amount, specifications, prices, and in places and times of supply.

3. There is no any agreement between the parties that makes it binding upon the Defendant that the supply shall be of its production.

4. The British specifications agreed upon could not be used in the special conditions such as corrosion resistance what means that the requirements by the client for corrosion resistance require additional types of specifications not the ordinary ones.

5. The purpose of conducting tests on the samples in accordance with these specifications is only devoted to the newly produced samples not to the used samples.

6. We could confirm from the inspection of RTA employees that some bolts have no stamps on them while others have rust signs but the source of such bolts has not been technically determined whether they belong to the Defendant or to others, and what led to the raise of this dispute is that it was RTA employees who detected such defects and not the consultant nor the complainant(the contractor) and that such detection happened after the bolts have been installed a long time ago.

7. It is crystal clear that there occurred a mixture in the kind of bolts contrary to the specifications between the bolts belong to the defendant and that of other suppliers, and that the defendant is entitled to verify whether theses bolts belong to it or to other suppliers.

8. The mechanism of taking the sample and sending it to the laboratory for inspection was not conducted in accordance with the agreed upon specification or with proper engineering work as it required the attendance of the defendant.

9. The laboratory neither checked whether all bolts are attributed to the defendant nor did he chosen the samples.

10. The most important letter reflects the fact of the defect in this dispute is the letter sent from the quality manager of the compliant to the witness, dated 30/06/2008 which shows that the complainant has changed the bolts specifications in breach of the terms set out in the consultant design and that both the consultant and the contractor (the compliant) has hidden this fact in front of the public persecutor and the court, and RTA.

11. The complainant admitted it has installed bolts not approved by the consultant and belonging to two other companies rather than the defendant's and these are the bolts which failed.

12. What is strange is that the consultant has taken procedure against the Defendant but has not taken any against the Complainant although it was the Complainant who changed the specifications related to corrosion resistance and installed bolts without stamps as well.

13. Technically the laboratory certificates in respect of the Defendant are nothing as it has been proven throughout the acknowledgement of the laboratory that the laboratory itself is technically not qualified for conducting these tests according to United Kingdom Accreditation Service which works according to the British specifications with regard to this dispute. In addition, four certificates out of the five issued by the laboratory for the Complainanthave nothing to do with the Defendant, rather they are related to other companies.

14. We realized that the 50% per cent of success and failure decided by the laboratory regarding all samples submitted to it means that test

certificates cannot assert that the failure was on the part of the products supplied to the Complainant according to payment certificates.

15. The possibility of existence of fraud is built on three assumptions; fraud in putting the stamps, fraud in the type of galvanic plating for corrosion resistance, and fraud in mechanical properties, all of which we proved its invalidity against the defendant. Moreover, It was evidenced that the Defendant has no benefit from fraud in goods whose value do not exceed 12.000 AED and it has clients from government institutions on the state level and in the middle east, and in oil and gas industry and this requires considering the standard specifications precisely.

16. The defendant is still entitled to a sum of 147219.70 AED based on the acknowledgement of the complainant itself.

Concluding observation

And where it is our nature that we do not exaggerate in our reports to show our position as if we defend the report applicant, but in this lawsuit we have seen the wonder (through the documents) from the complaint, specially the passing of the lawsuit in front of the prosecutor and its reliance on this number of witnesses without incurring itself the trouble of technical search in the test certificates to find out the defect.

Strangely, the number of test certificates issued by the laboratory is five out of which four certificates are not relevant to the defendant this means that 90 % of these certificates and its results has no relation with the defendant. The remaining certificate is about just two types of bolts as will be indicated in the following schedule. As for the first type just three bolts were supplied at a value of 39 AED. As for the second an amount of bolts worth 10644 AED out of the contract total value of 231958 AED based on payment bills was

supplied. This means that the percentage of supplied bolts does not exceed 4.5%. Further as regarding the laboratory claim that the sample has failed in the tensile test, the laboratory declared in a notice (628-629) that it is technically unqualified for conducting this kind of tests in accordance with British Accreditation Council which adopt British specifications as the basis of its work. The laboratory, in addition, did not specify whether the whole sample is of the Defendant bolts or belongs to others which means the test certificates along with its results are all nothing in this dispute. I find nothing in all that exerted effort in trying to prove defect on the part of the Defendant but an explicit kind of wasting the precious time of the public prosecutor and the court.

Expert: Muhammad Suliman Al Marzouqi