

**TEST REPORT**

APPLICANT : PT. WOODONE INTEGRA INDONESIA  
JL. RAYA INDUSTRI NO. 678 RT 013 RW 007  
BETRO, SEDATI, SIDOARJO 61253  
EAST JAVA INDONESIA

DATE : NOVEMBER 07, 2019

ATTN: MADE PRAMANA / YOPIE HANDOYO

SAMPLE DESCRIPTION:

ONE (1) SET OF SUBMITTED SAMPLES SAID TO BE:  
SAMPLE DESCRIPTION : HINGE, ROUND HANDLE, MORTISE DOOR LOCK  
COLORS : SILVER CHROME AND WHITE (FOR MORTISE LOCK)  
COUNTRY OF DESTINANTION : ROMANIA  
BUYERS COMPANY NAME : KING FISHER  
COUNTRY OF ORIGIN : INDONESIA  
TESTING STAGE : PRODUCTION SAMPLE

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TESTS CONDUCTED:

AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGES.

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CONCLUSION:

<u>TESTED SAMPLE</u>	<u>STANDARD</u>	<u>RESULT</u>
SUBMITTED SAMPLE	CORROSION TESTS IN ARTIFICIAL ATMOSPHERES - SALT SPRAY TESTS WITH REFERENCE TO ISO 9227: 2017- NSS TEST - DURATION: (48 HOURS)	SEE TEST CONDUCTED

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PREPARED AND CHECKED BY:  
FOR INTERTEK INDONESIA

TAUFIQ URAKHMAN  
HARDLINE LAB MANAGER

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Tests conducted:

**Corrosion Resistance Test**

With reference to ISO 9227: 2017 – Modified - Corrosion Tests In Artificial Atmospheres-Salt Spray Tests; the submitted sample was subjected to the following test:

**Neutral Salt Spray Test (NSS):**

Testing Condition:

- (1) Sodium Chloride (NACL) Solution Concentration = 50 g/L ± 5 g/L
- (2) pH = 6.5 - 7.2
- (3) Chamber Temperature = 33 - 37°C
- (4) Exposure Period = 48 Hours

Note:

No specific requirement from client

**Corrosion Evaluation:**

- 1. Assignment of protection rating (R<sub>P</sub>) and assignment appearance rating (R<sub>A</sub>)

With reference to ISO 10289-1999(E): Method for corrosion testing of metallic and other inorganic coating on metallic substrates – Rating of test specimens and manufactured articles subjected to corrosion tests, the tested submitted samples were evaluated as following:

TESTED SPECIMENS/SAMPLE	RESULT OF RATING	
	200 HOURS	
	R <sub>P</sub>	R <sub>A</sub>
Hinge	R <sub>P</sub> 8	R <sub>A</sub> 8
Round Handle	R <sub>P</sub> 10	R <sub>A</sub> 10
Mortise Door Lock	R <sub>P</sub> 6	R <sub>A</sub> 6
Mortise Door Lock (plate)	R <sub>P</sub> 9	R <sub>A</sub> 9
Flat Head Screw	R <sub>P</sub> 10	R <sub>A</sub> 10
Round Head Screw	R <sub>P</sub> 10	R <sub>A</sub> 10

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Tests conducted:

Note:

1. Assessment Of Protection Rating And Appearance Rating

R<sub>P</sub>: Protection Rating - Ability of the coating to protect the basis metal from corrosion

R<sub>A</sub>: Appearance Rating – Overall appearance of the specimen

Protection (R<sub>P</sub>) and Appearance (R<sub>A</sub>) Ratings

<u>Rating Number</u> (R <sub>P</sub> or R <sub>A</sub> )	<u>Area of Defects A (%)</u>
10	No Defects
9	0<A≤0.1
8	0.1<A≤0.25
7	0.25<A≤0.5
6	0.5<A≤1.0
5	1.0<A≤2.5
4	2.5<A≤5
3	5<A≤10
2	10<A≤25
1	25<A≤50
0	50<A

2. Classification of types coating deterioration:

- A Staining and/or color change due to deterioration of the coating (other than that of obvious basis metal corrosion products)
- B Dulling with little or no visible corrosion of coating
- C Corrosion products from anodic coatings
- D Corrosion products from cathodic coatings
- E Surface pitting (corrosion pits probably not extending through to the basis metal)
- F Flaking, peeling, spalling
- G Blistering
- H Cracking
- I Crazeing
- J Crow's feet or star-shaped defects

Condition after Test **48 hours**:

- Hinge : B
- Round Handle : No Visual Change
- Mortise Door Lock : A, D
- Mortise Door Lock (plate) : B
- Flat Head Screw : No Visual Change
- Round Head Screw : No Visual Change

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Tests conducted:

- 3. The subjective assessment of the degree of deterioration after **48 hours**

VS = Very slight amount  
 S = Slight amount  
 M = Moderate amount  
 X = Excessive amount

Condition after Test **48 hours**:

- Hinge : S
- Round Handle : No Visual Change
- Mortise Door Lock : S
- Mortise Door Lock : VS
- Flat Head Screw : No Visual Change
- Round Head Screw : No Visual Change

**REMARK:**

Test was conducted for **48 hours** as per applicant request.

Date Sample Received : October 30, 2019  
 Testing Period : October 30, 2019 to November 07, 2019

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END OF REPORT

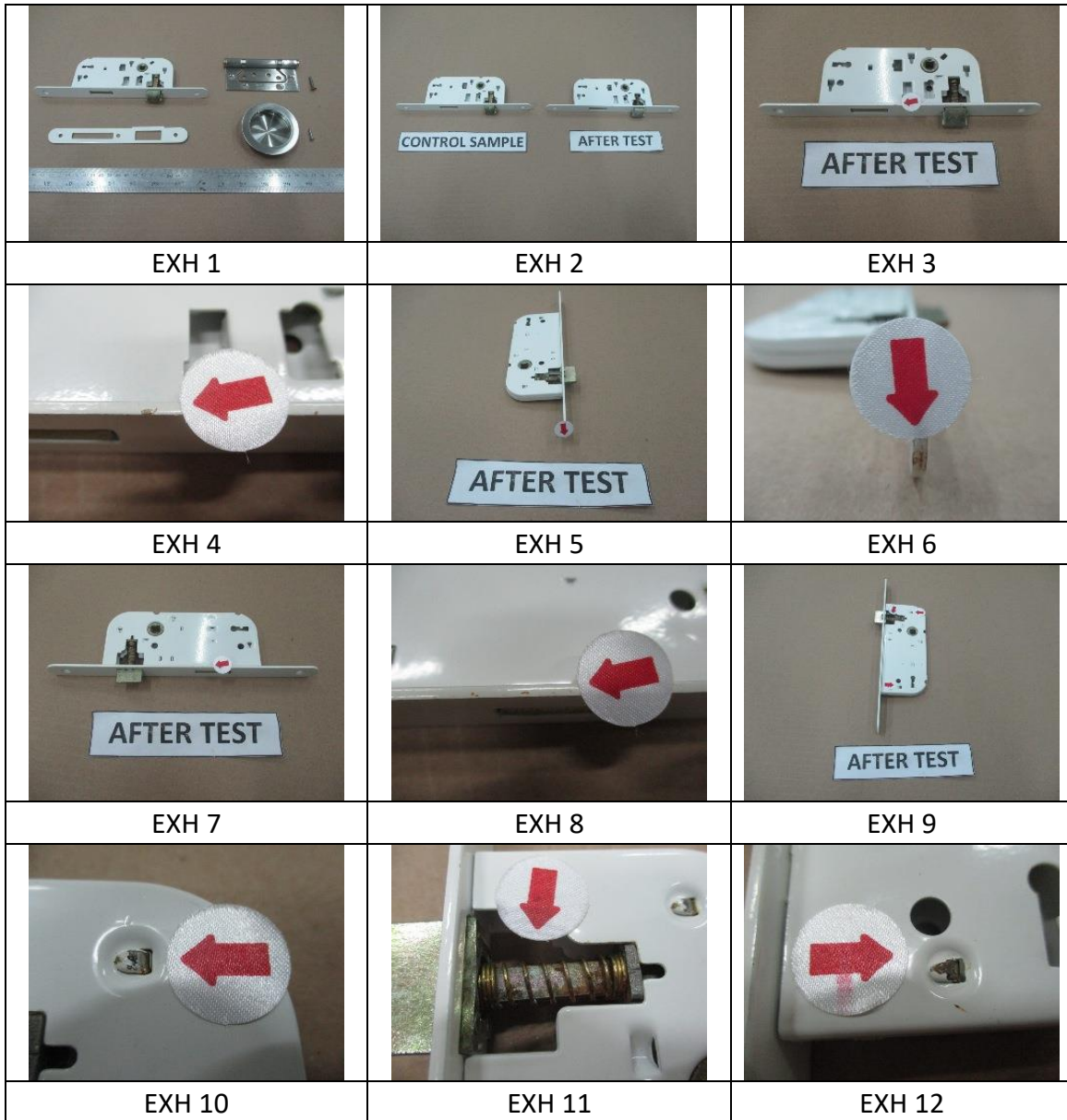
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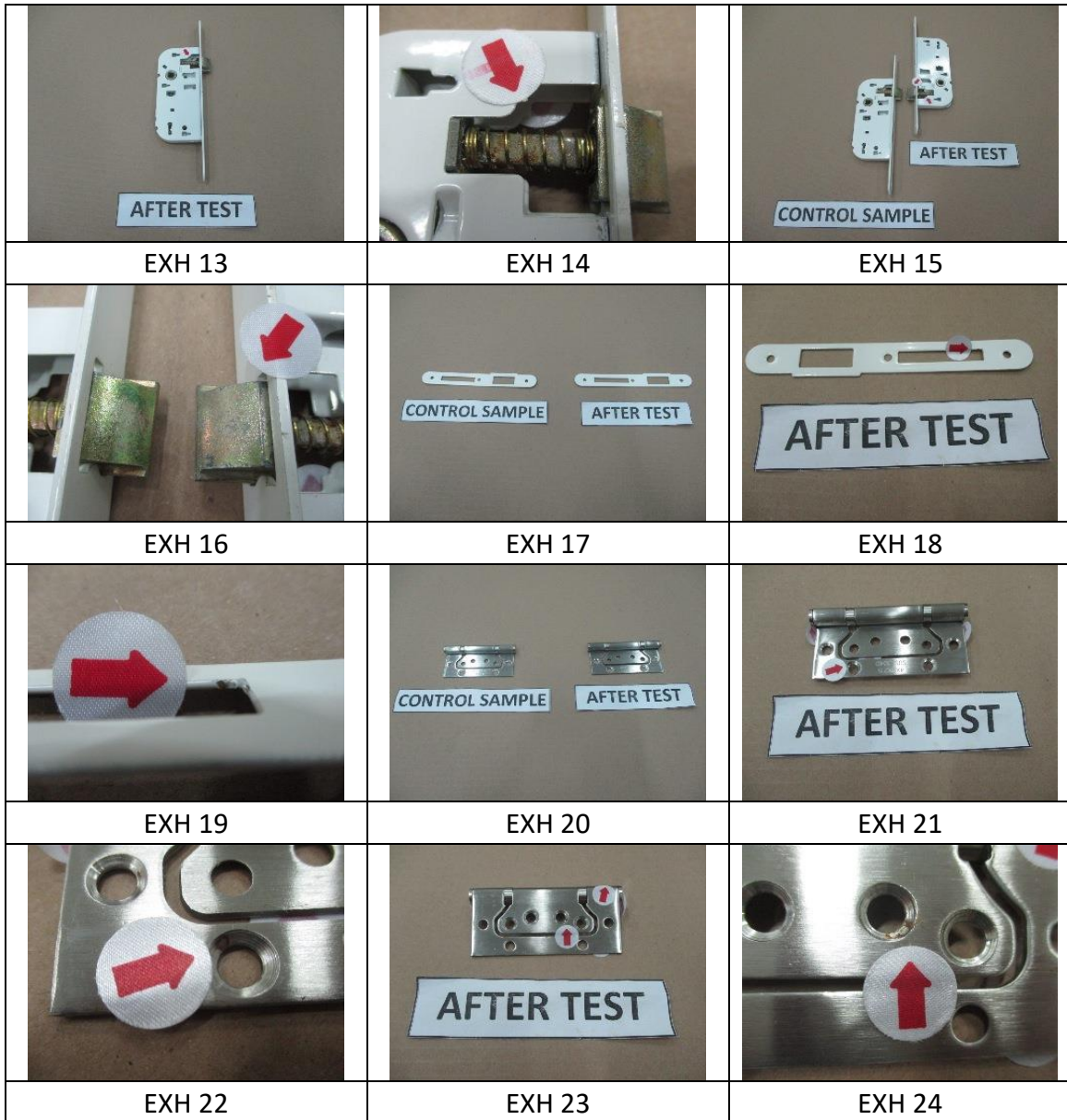


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