# SECTION 5 STANDARDS FOR REPORTS AND FORMS

### **5.1 REPORTS**

The NEBB Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems establishes minimum requirements of a NEBB Certified TAB Report. The standards have been developed and written using "Shall, Should, and May" language. It is important to note these particular words throughout this document and how they pertain to NEBB Procedural Standards.

**NEBB does not require the use of NEBB produced forms.** Customized forms are acceptable based on the data acquisition requirements of this section. Where contract document data reporting requirements exceed the minimum requirements of NEBB, the NEBB Certified TAB Firm is responsible to meet the requirements of the contract documents.

NEBB Test, Adjust, and Balance Reports shall include the following information:

- A. REPORT TITLE
- **B. REPORT CERTIFICATION**
- C. TABLE OF CONTENTS
- D. REPORT SUMMARY / REMARKS
- E. APPROPRIATE FORMS
- F. INSTRUMENT CALIBRATION
- G. ABBREVIATIONS

### 5.2 REQUIRED FORMS

Listed below are the requirements for each NEBB Certified TAB Report in Shall, Should, and May language.

### **5.2.1 REPORT TITLE**

Shall Data: The heading: "Certified Test; Adjust; Balance Report"; Project Name / Address; Engineer Name; HVAC Contractor Name; NEBB Certified TAB Firm Name / Address / Certification Number.

May Data: Architect Name; Architect Address / Contact Numbers; Engineer Address / Contact Numbers; HVAC Contractor Address / Contact Numbers.

### **5.2.2 REPORT CERTIFICATION**

The certification page SHALL bear the stamp of the NEBB Qualified TAB Supervisor. The stamp on the certification page SHALL be signed as evidence that the NEBB Supervisor has reviewed and accepted the report. **Signature stamps are specifically prohibited.** 

**Shall Data:** Project Name; Certifying NEBB Qualified TAB Supervisor's Name; Firm Name; Certification Number; Expiration Date; Certifying NEBB Qualified TAB Supervisor's NEBB Stamp (signed & dated); and the following exact verbiage:

"THE DATA PRESENTED IN THIS REPORT IS A RECORD OF SYSTEM MEASUREMENTS AND FINAL ADJUSTMENTS THAT HAVE BEEN OBTAINED IN ACCORDANCE WITH THE CURRENT EDITION OF THE NEBB PROCEDURAL STANDARDS FOR TESTING, ADJUSTING, AND BALANCING OF ENVIRONMENTAL SYSTEMS. ANY VARIANCES FROM DESIGN QUANTITIES, WHICH EXCEED NEBB TOLERANCES, ARE NOTED IN THE TEST- ADJUST- BALANCE REPORT PROJECT SUMMARY."

(This data may be included on the report title page or on a separate certification page.)

### **5.2.3 TABLE OF CONTENTS**

The table of contents shall serve as a guide to the organization of the TAB report.

Shall Data: Page numbers of system and component information in the report.

### **5.2.4 REPORT SUMMARY / REMARKS**

A NEBB Certified TAB Report includes a narrative description of system set-up conditions established prior to testing adjusting and balancing. The narrative should explain the rational for posturing a system, such as to establish a full load condition, and the steps taken to achieve the desired set-up.

This section also includes a listing of deficiencies in the summary and identifies the appropriate pages in the report. "Deficiency" can be subjective when performing TAB work. Part of the NEBB Supervisor's responsibilities is to determine "noteworthy" deficiencies.

**Shall Data:** Summary of all items that exceed NEBB / Contract Document tolerances or any other items that require discussion / explanation.

### **5.2.5 ALL REPORT PAGES**

All tested items included in the NEBB TAB Report shall be clearly identified with a unique designation. The method of identification may use schematic diagrams, mechanical plans where permissible, or a narrative description. Each data form supplied in a NEBB TAB Report shall include the name of the responsible technician / NEBB Qualified TAB Supervisor who reported the information, and the time period the data was collected.

Shall Data: Project name. All pages shall be numbered consecutively.

May Data: Remarks section to record any information pertinent to the data reported on the data sheet.

### **5.2.6 INSTRUMENT CALIBRATION**

This is a listing of the instruments that will be used to verify the reported data.

### **SECTION 5** STANDARDS FOR REPORTS AND FORMS

### Shall Data:

Silali Data.	
Instrument type	Instrument serial Number
Instrument manufacturer	Instrument calibration Date
	Dates of use
Instrument model Number	Dates of disc

5.2.7 ABBREVIATIONS
This is a list of definitions of the relevant abbreviations used in the report.

Shall Data: A listing of all abbreviations and their definition as used in the report.

# **5.3 AIR HANDLING UNIT TEST DATA (CENTRAL STATION)**

Shall Desig	/ Subm	ittal Data:
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Silati Design / Octamica Date:		
Unit designation	Fan rpm	
Manufacturer	Fan motor HP (kW)	
Model number	Fan motor rpm	
	Fan motor voltage	
Total design airflow		
Total outlet airflow	Fan motor phase	
Outside airflow	Total SP or External SP	

### Shall Actual / Test Data:

Silali Actual / Test Dutu.	
Unit serial number	Fan motor rated voltage
Supply airflow	Fan motor rated amperage
	Fan motor service factor
Return airflow	Fan motor operating voltages
Outside airflow	Fall friotor operating voltages
Total suction SP	Fan motor operating amperages
Total discharge SP	Motor sheave OD / bore
Total SP	Fan sheave OD / bore
	Sheave centerline distance
Fan motor HP (kW)	
Fan motor rpm	Fan rpm
Fan motor operating HZ	Number belts / size

### Should Design / Submittal Data:

Should besign / Submittal bata.	
Unit type / size / arrangement / class	
External SP	

### Should Actual / Test Data:

Silvaid Actual / 1681 Data.	
Fan motor manufacturer	External discharge SP
Fan motor frame	External suction SP
External SP	All coil and filter pressure drops (ΔP)

### May Design / Submittal Data:

may book and the second	
Fan discharge position	

Belt manufacturer Supply airflow in economizer mode	Fan motor no load amperages Fan motor BHP (kW) Number filters / type / size Adjustable sheave operating diameter
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### SECTION 5 STANDARDS FOR REPORTS AND FORMS

# 5.4 AIR HANDLING UNIT TEST DATA (PACKAGE / UNITARY BELT DRIVE)

Shall Design / Submittal Data:	
Unit designation	Fan rpm
Manufacturer	Fan motor HP (kW)
Model number	Fan motor rpm
Total design airflow	Fan motor voltage
Total outlet airflow	Fan motor phase
Outside airflow	Total SP or External SP

### Shall Actual / Test Data:

Silati Actual Frest Data.	
Unit serial number	Fan motor rated voltage
Supply airflow	Fan motor rated amperage
Return airflow	Fan motor service factor
Outside airflow	Fan motor operating voltages
External suction SP	Fan motor operating amperages
External discharge SP	Motor sheave OD / bore
	Fan sheave OD / bore
External SP	Sheave centerline distance
Fan motor HP (kW)	
Fan motor rpm	Fan rpm
Fan motor operating HZ	Number belts / size

### Should Design / Submittal Data:

Olionia Booldii , Gastilitta - ara-	
Unit type / size / arrangement / class	External SP

### Should Actual / Test Data:

Silonia Vetati i i est para:	
Fan motor manufacturer	Fan motor frame

### May Actual / Test Data:

INCA MORDELL TOUR DEST.	
Sheave manufacturer	Fan motor no load amperages
Belt manufacturer	Fan motor BHP (kW)
Supply airflow in economizer mode	Number filters / type / size
Fan motor amperage in economizer mode	All coil and filter pressure drops (ΔP)
difficion differences	Adjustable sheave operating diameter

# 5.5 AIR HANDLING UNIT TEST DATA (PACKAGE / UNITARY DIRECT DRIVE)

### Shall Design / Submittal Data:

Unit designation Manufacturer Model number Total design airflow Total outlet airflow Outside airflow	Fan rpm Fan motor HP (kW) Fan motor voltage Fan motor phase Total SP or External SP
--	---

# STANDARDS FOR REPORTS AND FORMS

Ohall	Actual	/ Toot	Data:
Shall	ACTUR	IPSI	vata:

Silali Actual / 165t Data.	
Unit serial number	Fan motor HP (kW)
Supply airflow	Fan rpm or speed setting
	Fan motor rated voltage
Return airflow	Fan motor rated amperage
Outside airflow	
External suction SP	Fan motor service factor
External discharge SP	Fan motor operating voltages
External SP	Fan motor operating amperages
LAIGHIGHON	Fan motor operating HZ
I and the second	

### May Design / Submittal Data:

Fan motor E	3HP (kW)
-------------	----------

### May Actual / Test Data:

Fan motor manufacturer
Fan motor calculated BHP (kW)
Supply airflow in economizer mode

Fan motor amperage in economizer mode All coil and filter pressure drops (ΔP) Number filters / type / size

# **5.6 FAN TEST DATA (BELT DRIVE)**

### Shall Design / Submittal Data:

Olidii Designi / Dabinitta: = = ===	
Unit designation	Fan rpm
Type of service	Fan motor HP (kW)
Manufacturer	Fan motor rpm
Model number	Fan motor voltage
Total design airflow	Fan motor phase
Total outlet airflow	Total SP or External SP
Total outlet all now	

Shall Actual / Test Data:		_
Shall Actual / Test Data: Unit serial number Total airflow Suction SP Discharge SP	Fan motor service factor Fan motor operating voltages Fan motor operating amperages Motor sheave OD / bore Fan sheave OD / bore	
TSP or ESP Fan motor HP (kW) Fan motor rpm Fan motor rated voltage Fan motor rated amperage	Sheave on 7 bole Sheave centerline distance Fan rpm Number belts / size Fan motor operating HZ	

### Should Design / Submittal Data:

Unit type / size / arrangement / class	External SP

### Should Actual / Test Data:

Q110012 10000 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
l = '	
Fan motor manufacturer	
i Ean moior mailuiacusei	
U	

	Fan motor no load amperages
	Fan motor calculated BHP (kW)
All filter pressure drops (ΔP)	Adjustable sheave operating diameter

# **5.7 FAN TEST DATA (DIRECT DRIVE)**

[Required for fans of 1/6 HP (125 W) and greater]

hall Design / Submittal Data: Unit designation	Total SP or External SP
Type of service	Fan speed
Manufacturer	Fan motor HP (kW)
Model number	Fan motor voltage
Total design airflow	Fan motor phase
Total outlet airflow	
Shall Actual / Test Data:	
Unit serial number	Fan rpm or speed setting
Total airflow	Fan motor rated voltage
Suction SP	Fan motor rated amperage
Discharge SP	Fan motor operating voltages
Total SP or External SP	Fan motor operating amperages
Fan motor HP (kW)	Fan motor operating HZ
Should Design / Submittal Data: Unit type / size / arrangement / class	External SP
Should Actual / Test Data: Fan motor manufacturer	
May Actual / Test Data:	
All filter pressure drops (ΔP)	Fan motor calculated BHP (kW)
5.8 FAN TEST DATA (DIRECT D [Required for fans less than 1/6 HP (125 Shall Design / Submittal Data:	
Unit designation	Model number
Type of service	Total design airflow
Manufacturer	<b>3</b>
INGINICOLO	
Shall Actual / Test Data:	
Total airflow	

### SECTION 5 STANDARDS FOR REPORTS AND FORMS

### 5.9 AIR OUTLET TEST DATA (ALL)

	ALL)
Shall Design / Submittal Data:	
System designation	Design airflow
Outlet number	System total design airflow
Area served	Code or type
Size	
Shall Actual / Test Data:	
Final velocity (when Ak ≠1.0)	Final airflow
Ak factor (when Ak ≠1.0)	
May Actual / Test Data First test reading	Instrument used for testing
5.10 VARIABLE VOLUME TER	M. TEST DATA (PRESSURE DEPENDENT)
5.10 VARIABLE VOLUME TER Shall Design / Submittal Data:	
5.10 VARIABLE VOLUME TER Shall Design / Submittal Data: VAV terminal designation	Design maximum airflow
Shall Design / Submittal Data:	Design maximum airflow Minimum design cooling airflow
Shall Design / Submittal Data: VAV terminal designation	Design maximum airflow
Shall Design / Submittal Data: VAV terminal designation Terminal type	Design maximum airflow Minimum design cooling airflow
Shall Design / Submittal Data: VAV terminal designation Terminal type Size  Shall Actual / Test Data: Final maximum airflow	Design maximum airflow Minimum design cooling airflow Heating design airflow
Shall Design / Submittal Data: VAV terminal designation Terminal type Size Shall Actual / Test Data:	Design maximum airflow Minimum design cooling airflow

May Actual / Test Data:	
First test reading	Instrument used for testing

# 5.11 VARIABLE VOLUME TERM. TEST DATA (PRESSURE INDEPENDENT)

Shall Design / Submittal Data:	
VAV terminal designation	Design maximum airflow
Terminal type	Minimum design cooling airflow
Size	Heating design airflow

# Final maximum airflow Final minimum cooling airflow Final heating airflow DDC flow correction / calibration factor(s) (where available) DDC max / min flows (where available) Include connected Grille, Register, and Diffuser data for each VAV address

May Actual / Test Data:	
First test reading	Instrument used for testing

# 5.12 FAN POWERED TERMINAL TEST DATA (PRESSURE DEPENDENT)

Shall	Design	/ Submittal Data:
JUBIL	Desidii	CADIIIIII Data.

Snail Design / Submittat Data.	
VAV terminal designation Primary maximum airflow Primary minimum airflow(s)	Terminal type Size Fan airflow

### Shall Actual / Test Data:

1 Illies (treatment and treatment	Fan speed (High, Medium, Low, Variable etc.)
Final minimum cooling airflow Final primary heating airflow Fan airflow	Include connected Grille, Register, and Diffuser data for each VAV address

### May Actual / Test Data:

<u></u>	
First test reading	Instrument used for testing

# 5.13 FAN POWERED TERMINAL TEST DATA (PRESSURE INDEPENDENT)

Shall Design / Submittal Data:

Shall Design / Submitter Date.	
VAV terminal designation	Terminal type
Primary maximum airflow	Size
Primary minimum airflow(s)	DDC address
Fan airflow	

### Shall Actual / Test Data:

Final minimum cooling airflow Final primary heating airflow Fan airflow	Include connected Grille, Register, and Diffuser data for each VAV address DDC flow correction / calibration factor(s) (where available) DDC max / min flows (where available)
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### May Actual / Test Data:

First test reading Instrument used for testing	

# **5.14 DUCT TRAVERSE TEST DATA**

Shall Design / Submittal Data:

Oligii Designi / Gabiiii	
System designation	Design airflow
Traverse designation	Duct size, I.D. (width, height, diameter)
Location	Duct area

Shall Actual / Test Data: Dial setting

ΔΡ

### SECTION 5 STANDARDS FOR REPORTS AND FORMS

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Shall Actual / Test Data:	
Average velocity in duct	Static pressure at traverse location.
Duct airflow	Instrumentation used to measure flow
May Actual / Test Data:	D. A. Indonesia and the control of t
Velocity readings (presented in grid	Duct air temperature
form to represent location in duct)	Correction factor
Altitude	
5.15 HYDRONIC PUMP TEST DA	ΙΤΔ
Shall Design / Submittal Data: Unit designation	Model number / size
Type of service	Design flow
Manufacturer	Design head
Motor HP (kW)	Pump / Motor RPM
Impeller size	
Impelier size	
Shall Actual / Test Data:	
Unit serial number	No flow suction pressure
Motor manufacturer	No flow discharge pressure
Motor HP (kW)	No flow head
Pump / Motor rpm	Impeller diameter
Motor operating voltages	Final suction pressure
Motor rated amperage	Final discharge pressure
Motor running load amperages	Total dynamic head
Motor operating HZ	Final flow
May Actual / Test Data:	
The depth of the second	Calculated pump efficiency
Motor calculated BHP (kW)	Static fill pressure
Calculated water HP (kW)	Otatio in procours
	/ALVE TEST DATA (FIXED O
5.16 HYDRONIC BALANCING \	ADJUSTABLE ORIFICE
	ADJUSTABLE ON TOL
Shall Design / Submittal Data:	Model number
Unit designation	Size
Service	Flow
Manufacturer	FIUW

Flow

Calculated airside sensible MBH (kW)
Calculated airside total MBH (kW)

Airside face velocity

### SECTION 5 STANDARDS FOR REPORTS AND FORMS

### 5.17 HYDRONIC BALANCING VALVE TEST DATA (SELF-ADJUSTING) Shall Design / Submittal Data: Size Unit designation Flow Service Operating pressure range Manufacturer Model number Shall Actual / Test Data: Flow ΔΡ 5.18 ULTRASONIC FLOW MEASUREMENT TEST DATA Shall Design / Submittal Data: Location Reading designation Flow Service Shall Actual / Test Data: Pipe material Pipe size Pipe wall thickness Transducer size Water flow Spacing distance Application 5.19 COOLING COIL TEST DATA (HYDRONIC) Shall Design / Submittal Data: Water flow Coil designation Airflow System served Coil location Shall Actual / Test Data: Water flow Final airflow May Design / Submittal Data: Airside face velocity Coil manufacturer Number of rows Model number Number fins per inch (cm) Airside face area Entering water temperature Entering air DB / WB temperature Leaving water temperature Leaving air DB / WB temperature Waterside total MBH (kW) Airside sensible MBH (kW) Airside total MBH (kW) Waterside AP Airside ∆P May Actual / Test Data: Entering water temperature Entering air DB / WB temperature Leaving water temperature Leaving air DB / WB temperature Waterside ∆T Entering air enthalpy Leaving air enthalpy Waterside ∆P Calculated waterside total MBH (kW)

Airside  $\Delta P$ 

# STANDARDS FOR REPORTS AND FORMS

# 5.20 COOLING COIL TEST DATA (DX)

Chall	Design	/ Suhm	ilttal Data:
Snau	Design	JOUDIL	iillai vala.

Chair Dooigh / Cabimeter = acar	,
Coil designation	Airflow
System served	Coil location

### Shall Actual / Test Data:

Final airflow

May Design / Submittal Data:

may besign / Submitte bate:		
Entering air DB / WB temperature Leaving air DB / WB temperature Airside total MBH (kW) Coil manufacturer Model number Airside face area	Airside ΔP Airside sensible MBH (kW) Airside face velocity Number of rows Number fins per inch (cm)	

May Actual / Test Data:

indy Noted : 1 to 1 batter	41 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
Entering air DB / WB temperature	Calculated airside sensible MBH (kW)
Leaving air DB / WB temperature	Calculated airside total MBH (kW)
Entering air enthalpy	Airside ΔP
Leaving air enthalpy	Airside face velocity

# **5.21 HEATING COIL TEST DATA (HYDRONIC)**

Shall Design / Submittal Data

Shan besign / Submittal bata.	
Coil designation	Water flow
System served	Airflow
Coil location	

### Shall Actual / Test Data

Silali Actual / 18st Data.	
Final airflow	Final water flow

May Design / Submittal Data:

Ividy Design / Submitted Data.	
Entering air DB temperature	Entering water temperature
Leaving air DB temperature	Leaving water temperature
Airside total MBH (kW)	Waterside total MBH (kW)
Airside ΔP	Waterside ∆P
<b>■</b> •	Airside face velocity
Coil manufacturer	Number of rows
Model number	
Airside face area	Number fins per inch (cm)

Entering air DB temperature	Entering water temperature
Leaving air DB temperature	Leaving water temperature
Calculated airside total MBH (kW)	Waterside ΔT
Airside ΔP	Waterside ΔP
	Calculated waterside total MBH (kW)
Airside face velocity	Calculated Water olds (State 1)

### SECTION 5 STANDARDS FOR REPORTS AND FORMS

# 5.22 HEATING COIL TEST DATA (STEAM)

Shall Design / Submittal Data:	
Coil designation	Airflow
System served	Coil location

### Shall Actual / Test Data:

Silan Actual / 1881 Data.	
	T
Final airflow	

May Design / Submittal Data:

may boolgit? oabilities beas.	·
Entering air DB temperature	Airside total MBH (kW)
Leaving air DB temperature	Airside ΔP
Coil manufacturer	Airside face velocity
Model number	Number of rows
Airside face area	Number fins per inch (cm)

May Actual / Test Data:

May Actual / Test Data.	
Entering air DB temperature Leaving air DB temperature	Airside total MBH (kW) Airside face velocity
Airside ΔP	

# 5.23 HEATING COIL TEST DATA (ELECTRIC)

Shall Design / Submittal Data:

Siigii Desigii / Cubiiiittai Data:	
Coil designation	KW
System served	Voltage / Phase
Coil location	

### Shall Actual / Test Data:

Silali Actual / Test Data.	
Final airflow	Amperages
Voltages	

May Design / Submittal Data:

may besign / Submitter batta.	
Airside total MBH (kW)	Airside ΔP
Number of Stages	

May Actual / Test Data:

may Actual Floor Date.	
Entering air DB temperature	Calculated airside total MBH
Leaving air DB temperature	Calculated KW
Airflow	Airside ΔP

# **5.24 CHILLER TEST DATA (WATER COOLED)**

Items not included below are outside the scope of TAB responsibilities

Shall Design / Submittal Data:

Unit designation	Evaporator ∆P
Manufacturer	Condenser water flow
Model number	Condenser water ∆P
Evaporator water flow	

### SECTION 5 STANDARDS FOR REPORTS AND FORMS

PRODUCTOR AND PRODUCTOR OF THE PRODUCTOR	
hall Actual / Test Data:	Condenser water flow
vaporator water flow	Condenser water ∆P
vaporator water ΔP	
vaporator water At	
lay Actual / Test Data:	
vaporator entering water temperature	Condenser entering water temperature
vaporator leaving water temperature	Condenser leaving water temperature
Evaporator ∆T	Condenser ΔT
5.25 CHILLER TEST DATA (AIR C	
tems not included below are outside the so	cope of TAB responsibilities
Shall Design / Submittal Data:	
Jnit designation	Evaporator water ΔP
Manufacturer	Evaporator water flow
Model number	
Dhall Astrol / Took Date:	
Shall Actual / Test Data:	Evaporator water ΔP
Unit serial number Evaporator water flow	Evaporator water 2.
274 poracor mator non	
May Actual / Tost Date:	
May Actual / Test Data:	F AT
Evaporator entering water temperature	Evaporator ΔT
Evaporator entering water temperature Evaporator leaving water temperature	Evaporator ΔT
Evaporator entering water temperature Evaporator leaving water temperature	
Evaporator entering water temperature Evaporator leaving water temperature  5.26 COMPRESSOR / CONDENSE	R TEST DATA
Evaporator entering water temperature Evaporator leaving water temperature	R TEST DATA
Evaporator entering water temperature Evaporator leaving water temperature  5.26 COMPRESSOR / CONDENSE  Testing of these components is outside the	R TEST DATA e scope of TAB services.
Evaporator entering water temperature Evaporator leaving water temperature  5.26 COMPRESSOR / CONDENSE Testing of these components is outside the  5.27 COOLING TOWER TEST DAT	R TEST DATA e scope of TAB services.
Evaporator entering water temperature Evaporator leaving water temperature  5.26 COMPRESSOR / CONDENSE Testing of these components is outside the 5.27 COOLING TOWER TEST DAT Shall Design / Submittal Data:	R TEST DATA e scope of TAB services.
Evaporator entering water temperature Evaporator leaving water temperature  5.26 COMPRESSOR / CONDENSE Testing of these components is outside the  5.27 COOLING TOWER TEST DAT	R TEST DATA e scope of TAB services.
Evaporator entering water temperature Evaporator leaving water temperature  5.26 COMPRESSOR / CONDENSE  Testing of these components is outside the  5.27 COOLING TOWER TEST DAT  Shall Design / Submittal Data: Unit designation	R TEST DATA e scope of TAB services.  A  Water flow
Evaporator entering water temperature Evaporator leaving water temperature  5.26 COMPRESSOR / CONDENSE Testing of these components is outside the 5.27 COOLING TOWER TEST DAT Shall Design / Submittal Data: Unit designation Manufacturer	R TEST DATA e scope of TAB services.  A  Water flow Model number
Evaporator entering water temperature Evaporator leaving water temperature  5.26 COMPRESSOR / CONDENSE  Testing of these components is outside the  5.27 COOLING TOWER TEST DAT  Shall Design / Submittal Data: Unit designation	R TEST DATA e scope of TAB services.  A  Water flow
Evaporator entering water temperature Evaporator leaving water temperature  5.26 COMPRESSOR / CONDENSE Testing of these components is outside the 5.27 COOLING TOWER TEST DAT Shall Design / Submittal Data: Unit designation Manufacturer  Shall Actual / Test Data:	R TEST DATA e scope of TAB services.  A  Water flow Model number
Evaporator entering water temperature Evaporator leaving water temperature  5.26 COMPRESSOR / CONDENSE Testing of these components is outside the 5.27 COOLING TOWER TEST DAT Shall Design / Submittal Data: Unit designation Manufacturer  Shall Actual / Test Data: Unit serial number	R TEST DATA e scope of TAB services.  A  Water flow Model number
Evaporator entering water temperature  Evaporator leaving water temperature  5.26 COMPRESSOR / CONDENSE  Testing of these components is outside the  5.27 COOLING TOWER TEST DAT  Shall Design / Submittal Data:  Unit designation  Manufacturer  Shall Actual / Test Data:  Unit serial number  May Design / Submittal Data:	R TEST DATA e scope of TAB services.  A  Water flow Model number
Evaporator entering water temperature Evaporator leaving water temperature  5.26 COMPRESSOR / CONDENSE Testing of these components is outside the 5.27 COOLING TOWER TEST DAT Shall Design / Submittal Data: Unit designation Manufacturer  Shall Actual / Test Data: Unit serial number	R TEST DATA e scope of TAB services.  A  Water flow Model number  Water flow
Evaporator entering water temperature  Evaporator leaving water temperature  5.26 COMPRESSOR / CONDENSE  Testing of these components is outside the  5.27 COOLING TOWER TEST DAT  Shall Design / Submittal Data: Unit designation Manufacturer  Shall Actual / Test Data: Unit serial number  May Design / Submittal Data: Entering water temperature Leaving water temperature	R TEST DATA e scope of TAB services.  A  Water flow Model number  Water flow Water AT
Evaporator entering water temperature  Evaporator leaving water temperature  5.26 COMPRESSOR / CONDENSE  Testing of these components is outside the  5.27 COOLING TOWER TEST DAT  Shall Design / Submittal Data: Unit designation Manufacturer  Shall Actual / Test Data: Unit serial number  May Design / Submittal Data: Entering water temperature	R TEST DATA e scope of TAB services.  A  Water flow Model number  Water flow Water AT

# **5.28 HOT WATER BOILER TEST DATA**

The testing of burner sections, burner / fuel controls, safety controls, and combustion gases are outside the scope of TAB services.

Shali	Design /	Submitta	l Data:

Olidii Doolgii / Qabiiiitta: Pass.	
Unit designation	Water flow
Manufacturer	Water △P
Model number	

### Shall Actual / Test Data:

1	Unit serial number	Water ∆P
	Water flow	

### May Actual / Test Data:

may Adiadi / 100t Bails.	
Entering water temperature	Water ∆T
Leaving water temperature	

# 5.29 HEAT EXCHANGER TEST DATA (WATER TO WATER)

### Shall Design / Submittal Data:

Shali besidii / Shbiilittai bata:	
Unit designation	Primary water flow
Location	Primary water ∆P
Service	Secondary water flow
Manufacturer	Secondary water ∆P
Model number	

### Shall Actual / Test Data:

Shall Actual / Test Data.	
Unit serial number	Secondary water flow
Primary water flow	Secondary water ΔP
Primary water ΔP	

### May Design / Submittal Data:

May Design / Submittal Data:	
Primary entering water temperature	Secondary entering water temperature
Primary leaving water temperature	Secondary leaving water temperature
Primary water ΔT	Secondary water ΔT

may Actual ( 1001 Date.	
Primary entering water temperature	Secondary entering water temperature
Primary leaving water temperature	Secondary leaving water temperature
Primary water ΔT	Secondary water ΔT
Tilliary water 21	

### SECTION 5 STANDARDS FOR REPORTS AND FORMS

# 5.30 HEAT EXCHANGER TEST DATA (STEAM TO WATER)

hall Design / Submittal Data:	Model number
Init designation ocation	Water flow
ocation Service	Water ΔP
lanufacturer	
Shall Actual / Test Data:	
Init serial number	Water ∆P
Vater flow	
May Design / Submittal Data:	Mator AT
Water entering temperature	Water ∆T
Nater leaving temperature	
M. Astual / Took Date	
May Actual / Test Data: Water entering temperature	Water ΔT
Water leaving temperature  Water leaving temperature	11000
<del></del>	
E 21 ENERGY RECOVERY W	/HEELS
5.31 ENERGY RECOVERY W Shall Design / Submittal Data:	
Shall Design / Submittal Data: Unit designation	Primary airflow
Shall Design / Submittal Data: Unit designation Location	Primary airflow Primary air ΔP
Shall Design / Submittal Data: Unit designation Location Service	Primary airflow Primary air ΔP Secondary airflow
Shall Design / Submittal Data:  Unit designation  Location  Service  Manufacturer	Primary airflow Primary air ΔP
Shall Design / Submittal Data: Unit designation Location Service Manufacturer	Primary airflow Primary air ΔP Secondary airflow
Shall Design / Submittal Data: Unit designation Location Service Manufacturer Model number	Primary airflow Primary air ΔP Secondary airflow Secondary air ΔP
Shall Design / Submittal Data: Unit designation Location Service Manufacturer Model number Shall Actual / Test Data:	Primary airflow Primary air ΔP Secondary airflow Secondary air ΔP
Shall Design / Submittal Data: Unit designation Location Service Manufacturer Model number  Shall Actual / Test Data: Unit serial number Primary airflow	Primary airflow Primary air ΔP Secondary airflow Secondary air ΔP
Shall Design / Submittal Data: Unit designation Location Service Manufacturer	Primary airflow Primary air ΔP Secondary airflow Secondary air ΔP
Shall Design / Submittal Data: Unit designation Location Service Manufacturer Model number  Shall Actual / Test Data: Unit serial number Primary airflow Primary air ΔP	Primary airflow Primary air ΔP Secondary airflow Secondary air ΔP
Shall Design / Submittal Data: Unit designation Location Service Manufacturer Model number  Shall Actual / Test Data: Unit serial number Primary airflow Primary air AP  May Design / Submittal Data:	Primary airflow Primary air ΔP Secondary airflow Secondary air ΔP  Secondary airflow Secondary air ΔP
Shall Design / Submittal Data: Unit designation Location Service Manufacturer Model number  Shall Actual / Test Data: Unit serial number Primary airflow Primary air ΔP  May Design / Submittal Data: Primary entering air temperatures	Primary airflow Primary air ΔP Secondary airflow Secondary airflow Secondary airflow Secondary air ΔP  Secondary air ΔP
Shall Design / Submittal Data: Unit designation Location Service Manufacturer Model number  Shall Actual / Test Data: Unit serial number Primary airflow Primary air ΔP  May Design / Submittal Data: Primary entering air temperatures Primary leaving air temperatures	Primary airflow Primary air ΔP Secondary airflow Secondary airflow Secondary airflow Secondary air ΔP  Secondary air ΔP  Secondary entering air temperatures Secondary leaving air temperatures
Shall Design / Submittal Data: Unit designation Location Service Manufacturer Model number  Shall Actual / Test Data: Unit serial number Primary airflow Primary air ΔP  May Design / Submittal Data: Primary entering air temperatures	Primary airflow Primary air ΔP Secondary airflow Secondary airflow Secondary airflow Secondary air ΔP  Secondary air ΔP
Shall Design / Submittal Data: Unit designation Location Service Manufacturer Model number  Shall Actual / Test Data: Unit serial number Primary airflow Primary air ΔP  May Design / Submittal Data: Primary entering air temperatures Primary air ΔT	Primary airflow Primary air ΔP Secondary airflow Secondary airflow Secondary air ΔP  Secondary air ΔP  Secondary entering air temperatures Secondary leaving air temperatures Secondary air ΔT
Shall Design / Submittal Data: Unit designation Location Service Manufacturer Model number  Shall Actual / Test Data: Unit serial number Primary airflow Primary air ΔP  May Design / Submittal Data: Primary entering air temperatures Primary air ΔT  May Actual / Test Data:	Primary airflow Primary air ΔP Secondary airflow Secondary airflow Secondary air ΔP  Secondary air ΔP  Secondary entering air temperatures Secondary leaving air temperatures Secondary air ΔT  Secondary entering air temperatures
Shall Design / Submittal Data: Unit designation Location Service Manufacturer Model number  Shall Actual / Test Data: Unit serial number Primary airflow Primary air ΔP  May Design / Submittal Data: Primary entering air temperatures Primary air ΔT	Primary airflow Primary air ΔP Secondary airflow Secondary airflow Secondary air ΔP  Secondary air ΔP  Secondary entering air temperatures Secondary leaving air temperatures Secondary air ΔT

# 5.32 DUCT AIR LEAKAGE TEST DATA (OPTIONAL)

Duct Leakage testing is outside the scope of the NEBB Procedural Standards. If duct leakage testing is required of the NEBB Certified TAB Firm by the Contract Documents, the work should be performed in accordance with SMACNA Standards.

Pressure class Seal class Airflow volume Surface area Airflow per surface-factor Percent allowable leakage	
	Seal class Airflow volume Surface area Airflow per surface-factor

Actual / Test Data:	
Test static pressure	Test section percent air leakage
Test section air leakage	Test witnesses