HI-SPEED INDUSTRIAL SERVICE

MILLINGTON, TN

August 10, 2021

Mitsubishi Chemicals

Subject: August vibration report

Most of the machines surveyed were found to be in good condition with the exception of the following:

***QualiTest***® uses a four-step rating system for defects.

**Class I:** Defect is present, but effect on reliability is not clear; no immediate action is required. Continue to normally monitor.

**Class II:** Defect (s) present that may cause problem in long term (2-6 months.). Repair during normal maintenance scheduling. Continue to monitor.

**Class III;** Defect (s) present that may cause failure in short term (less than 2 months.). This should be addressed as soon as practical, with a high maintenance priority. Increase monitoring frequency.

**Class IV;** Defect (s) present that makes continued reliability unpredictable, and possibility of secondary damage is high. Repairs should be made ASAP. An unscheduled shutdown should be considered for repairs

***Hi-Speed*** **Industrial Service** tests and inspects industrial machinery and equipment and makes recommendations concerning maintenance and repairs based on its experience in the field of industrial repair and maintenance. The information contained herein is provided as an opinion only, not as a guaranty or warranty of the matters discussed herein.

This completes our assessment of your equipment for this survey. Thank you for your business and don't hesitate to call if you have any comments or questions.

Sincerely,

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## Detailed Defects in alpha-numeric order

**SAR 03 Turbine Compressor Main Blower**
Vibrations have jumped up considerably and consist of a dominant shaft speed vibration and multiple harmonics for the turbine shaft measurements. **Rated a Class I Defect.**

## Observations

**ACN 07C ACH Product Feed Pump South**
The vibration data still shows what looks to be outer race defects in the motor inboard bearing and non-synchronous frequencies in the inboard pump bearings which are also most likely bearing defect harmonics. We will keep an eye on this unit in the future. No action is required at this time. **Rated a Class I Defect**

**ACN 08 ACH Blend Tank**
Motor shows slight increase in shaft speed vibration. Inspect for motor fan damage or coupling issues as time allows. **Rated a Class II Defect.**

**ACN13B #2 Kettle Circulation Pump**
Motor bearing data still shows outer race defects in the inboard bearing. The vibrations have not changed much recently. We will watch this carefully going forward. **Rated a Class II Defect.**

**ACN 14 ACH Off Grade Pump**
The data still shows signs of slight distress in the motor bearings. We see 3 to 4 g's RMS overall for the horizontal measurements. There seems to be long intervals between collected data, and the defects seem to have been there for some time. We also see an elevated axial vibration in the motor at shaft speed above 0.4:/second velocity peak. Inspect the coupling and fasteners and have the alignment checked and adjusted if needed. **Rated a Class II Defect**

**AC17 Carrier Refrigeration Unit**
The Peak Vue measurement for the inboard compressor measurement shows a large change in vibrations that could indicate distress in the unit. The database does not contain specific frequencies for the analysis parameter sets, so we cannot identify the exact problem, but the vibration peaks seem to be non-synchronous, which could indicate a possible bearing issue. **Rated a Class II Defect.**

**ACN28B ACN Fan East**
The motor shaft end still shows an elevated shaft speed vibration. Inspect and clean the fan wheel at the next downtime. Check all fasteners and structures.
**Rated a Class II Defect.**

**ACN29C ACN Cooling Tower Pump South**
Pump bearing data still shows non-synchronous harmonic peaks in the spectrum. Vibrations are most likely low amplitude bearing defect frequencies. A more detailed analysis could be provided if we had the bearing numbers in the database. **Rated a Class I Defect.**

**ACN36 ACN West Tank Circulation Pump**
The pump inboard horizontal vibrations are still elevated, especially at 4x shaft speed. We suspect an impeller vane pass vibration, or possibly a coupling issue. Check to make sure the pump flow and pressure are at design levels. Inspect the coupling also. **Rated a Class II Defect.**

**MON 32B ARC Reflux Pump South**
Pump vibration data for the inboard bearing overall has risen slightly and consists of a few harmonics of which the 5$^{th}$ is dominant and could indicate slight wear or flow issue. There are also a few non-synchronous peaks that could indicate minor bearing defects. No immediate action required. **Rated a Class I Defect.**

**MON 43B Amide Reactor Circulation Pump 2 South**
The pump inboard horizontal vibrations are still slightly elevated. We suspect an impeller vane pass vibration, or possibly a coupling issue. Check to make sure the pump flow and pressure are at design levels. Inspect the coupling also. **Rated a Class I Defect.**

**MON 50 MMA Decanter Feed Pump**
Pump vibration data for the inboard bearing overall has risen slightly and consists of a few harmonics of which the 5$^{th}$ is dominant and could indicate slight wear or flow issue. No immediate action required. **Rated a Class I Defect.**

**Mon 55 SM Hut Pump South**
The pump inboard horizontal vibration has substantially dropped. No further action required.

**MON 63W LBS Side Stream Pump West**
Vibration data still shows an increase in synchronous and non-synchronous peaks in the spectrum for the motor bearings. We suspect bearing defects are present; however the database does not have the bearing defect frequencies in the analysis parameter fault frequency sets. Ensure adequate bearing lubrication if applicable. Prepare to change out the motor in the future. **Rated a Class II Defect.**

**MON65 Amide Reactor Circulation Primary**
The motor is still showing a shaft speed vibration in the vertical measurements. Inspect the unit for loose fasteners, alignment, and coupling wear at time allows. **Rated a Class I Defect.**

**MON85E Water Treatment Pump East**
The pump inboard horizontal vibrations are elevated, especially at 5x shaft speed, which we suspect is impeller vane pass. Inspect the unit for loose fasteners, alignment, and coupling wear at time allows. Also ensure the pump is operating properly in the correct point on the performance curve. **Rated a Class I Defect.**

**SAR 10 Process Air Fan E**
The fan bearings still show a raised noise floor in the acceleration spectrum and impacting in the time domain as well as a few harmonics of the fundamental speed. This could be distress in the bearings, lubrication, mechanical looseness, or some other anomaly issue. Inspect the unit and bearings in the near future. **Rated a Class II Defect.**

**SAR 14 Combustion Air Fan West**
The data indicates distress in the inboard motor bearing. We only see about 1.8 g's RMS overall for the horizontal measurements. The fan bearings show a raised noise floor in the acceleration spectrum and impacting in the time domain as well as a few low amplitude harmonics of the fundamental speed. This could be distress in the bearings, lubrication, mechanical looseness, or some other anomaly. Ensure the bearings are lubricated if applicable. We will keep an eye on this unit in the future. No other action is required at this time. **Rated a Class I Defect.**

**SAR 39A Boiler Feed Water Pump Northwest**
The pump inboard horizontal vibration has substantially dropped indicating maintenance was performed. No further action required.

**SAR 39C Boiler Feed Water Pump Northeast**
We still see a slight shaft speed vibration in the motor outboard. Inspect the motor and drivetrain as time allows. **Rated a Class I Defect.**

**SAR 50A Drying Tower Circulation Pump West**
We see a slight increase of the shaft speed vibration in the motor. Inspect the motor and motor cooling fan, and drivetrain as time allows. **Rated a Class I Defect.**

**SAR55A Neutralization Pump North**
The data continues to indicate distress in the inboard motor bearing. Synchronous and non-synchronous vibrations are present. Ensure the motor bearings are lubricated if applicable. Be prepared to change out the motor in the future. **Rated a Class I Defect.**

**SAR 63 EM Spent Acid Feed Pump E**
The pump inboard bearing vibration data still indicates slight issues that are most like bearing defects. Ensure the bearings are lubricated. **Rated a Class I Defect.**

**SAR 66A, B, C Vertical Cooling Tower Pumps**
These units still have high vibrations at near ½" per second velocity overall. Vertical pumps are susceptible to imbalance and resonance. Some sheet metal covers prevent good bearing data to be collected. Inspect units for fastener and structure issues. Trim balancing might help. **Rated a Class I Defect.**

**SAR78A Cooling Tower Fan #1**
The motor continues have a elevated 1x RPM vibration in the axial measurements. Inspect the fasteners, structure, coupling and alignment as time allows. **Rated a Class I Defect.**

**SAR78D Cooling Tower Fan #4**
Motor speed vibration has dropped significantly in the motor inboard vertical but is still slightly elevated. We will watch carefully for changes going forward. **Rated a Class I Defect.**

**SAR 137A Contain Pit Pump North**
The 5x RPM vibration has risen again in the motor. We suspect an impeller pass vibration due to wear or flow issues. Clean/inspect as time allows. **Rated a Class I Defect.**

**SAR 161A North SAR Cooling Tower Fan West**
The motor still has a 1xRPM vibration and two smaller harmonics. Check for loose fasteners, coupling and drive train issues if so equipped. **Rated a Class I Defect.**

**Previously reported equipment but not running this survey**

**ACN 07B ACH Product Feed Pump Middle**
Data shows possible pump vane pass and cavitation. Check for process variables. **Rated a Class I Defect**

**ACN 13A #2 Kettle Transfer Pump North**
Vibration data shows an increase in non-synchronous peaks in the spectrum for the motor bearings. We suspect bearing defects are present since the frequencies match the overlay. Ensure adequate bearing lubrication if applicable. Prepare to change out the motor in the future. **Rated a Class II Defect.**

**ACN22 ACN Ref Booster Pump #2**
The motor and pump axial vibrations are still elevated at 4x shaft speed. Inspect the unit for loose fasteners, alignment, and coupling wear at time allows. Also ensure the pump is operating properly in the correct point on the performance curve. **Rated a Class I Defect.**

**MON 45 EM ACH Ref Brine Pump East**

Data for the motor outboard bearing shows possible outer race defects. We will watch this unit carefully going forward and recommend action as required. **Rated a Class II Defect.**

**MON132 Decanter Feed Pump Spare**
The pump inboard vertical and motor axial vibrations are elevated, especially at 1x shaft speed. Inspect the unit for loose fasteners, alignment, and coupling wear at time allows. Also ensure the pump is operating properly in the correct point on the performance curve. **Rated a Class II Defect.**

**SAR 38 Drying Tower Pump-out**
The pump inboard horizontal vibration has dropped but is still slightly elevated, especially at 1x shaft speed. Inspect the unit for loose fasteners, alignment, and coupling wear at time allows. Also ensure the pump is operating properly in the correct point on the performance curve. **Rated a Class I Defect.**

**SAR55B Neutralization Pump South**
The data continues to show signs of early distress in the inboard motor bearing. The motor also has a 1xRPM vibration that has generally been increasing since December. Inspect the unit for loose fasteners, alignment, and coupling wear at time allows. Ensure the motor bearings are lubricated if applicable. We will keep an eye on this unit in the future. **Rated a Class I Defect.**

**SAR222 Oleum Tower Drain Pump**
Inboard pump bearing has multiple synchronous and non-synchronous vibration peaks. Overall acceleration is over 4g's RMS. The bearing is in distress. Ensure they are lubricated properly. We will watch carefully going forward. **Rated a Class II Defect.**

**SAR231A Final Tower Circulation Pump North**
Vibrations have dropped substantially. No further actions required.

## August 2021 survey data

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                    Abbreviated Last Measurement Summary
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                Database:  Lucite Memphis MMA.rbm
                Area:      MMA
                Report Date:  10-Aug-21   07:57

MEASUREMENT POINT      OVERALL LEVEL        HFD / VHFD      EQUIPMENT SPEED
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0126        - Carrier Ref Unit               (28-Sep-20)
                        OVERALL LEVEL      1K-20kHz
        MOH               .025 In/Sec        .358 G-s         1780.0 RPM
        MOP               .026 G-s
        MOV               .028 In/Sec        .091 G-s
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| | | |
|---|---|---|
| MOA | .028 In/Sec | .045 G-s |
| MIH | .031 In/Sec | .396 G-s |
| MIP | .031 G-s | |
| MIV | .022 In/Sec | .188 G-s |
| MIA | .015 In/Sec | .123 G-s |
| IIH | .176 In/Sec | |
| IIP | 1.505 G-s | |
| IIV | .160 In/Sec | |
| IIA | .098 In/Sec | |
| OOH | .166 In/Sec | |
| OOP | 2.072 G-s | |
| OOV | .196 In/Sec | |
| OOA | .098 In/Sec | |
| CIH | .085 In/Sec | |
| CIP | .622 G-s | |
| CIV | .088 In/Sec | |
| CIA | .063 In/Sec | |
| COH | .041 In/Sec | |
| COP | .245 G-s | |
| COV | .043 In/Sec | |
| COA | .048 In/Sec | |

ACN04 - Topping Col Circ Pump (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .036 In/Sec | .311 G-s | 1175.0 RPM |
| MOP | .143 G-s | | |
| MOV | .038 In/Sec | .096 G-s | |
| MOA | .037 In/Sec | .052 G-s | |
| MIH | .030 In/Sec | .413 G-s | |
| MIP | .263 G-s | | |
| MIV | .036 In/Sec | .241 G-s | |
| MIA | .030 In/Sec | .097 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .095 In/Sec | .451 G-s | |
| PIP | .294 G-s | | |
| PIV | .056 In/Sec | .194 G-s | |
| PIA | .058 In/Sec | .189 G-s | |
| POH | .052 In/Sec | .591 G-s | |
| POP | .335 G-s | | |
| POV | .084 In/Sec | .187 G-s | |
| POA | .043 In/Sec | .121 G-s | |

ACN05B - Topp Column Xfer Pmp E (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .069 In/Sec | .874 G-s | 3575.0 RPM |
| MOP | .083 G-s | | |
| MOV | .060 In/Sec | .182 G-s | |
| MOA | .039 In/Sec | .123 G-s | |
| MIH | .062 In/Sec | 1.241 G-s | |
| MIP | .136 G-s | | |
| MIV | .053 In/Sec | .122 G-s | |
| MIA | .029 In/Sec | .082 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .110 In/Sec | .924 G-s | |
| PIP | .139 G-s | | |
| PIV | .110 In/Sec | .540 G-s | |
| PIA | .115 In/Sec | .258 G-s | |

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|---|---|---|---|---|
| ACN07A | - ACH Prod Feed Pump N | | (02-Aug-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .036 In/Sec | .104 G-s | 3575.0 RPM |
| | MOP | .012 G-s | | |
| | MOV | .112 In/Sec | .047 G-s | |
| | MOA | .037 In/Sec | .027 G-s | |
| | MIH | .060 In/Sec | .161 G-s | |
| | MIP | .075 G-s | | |
| | MIV | .068 In/Sec | .044 G-s | |
| | MIA | .031 In/Sec | .056 G-s | |
| | | OVERALL LEVEL | 1K-20KHz | |
| | PIH | .108 In/Sec | .161 G-s | |
| | PIP | .029 G-s | | |
| | PIV | .047 In/Sec | .178 G-s | |
| | PIA | .087 In/Sec | .108 G-s | |
| ACN07C | - ACH Prod Feed Pump S | | (22-Jul-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .095 In/Sec | 1.249 G-s | 3575.0 RPM |
| | MOP | .552 G-s | | |
| | MOV | .106 In/Sec | .628 G-s | |
| | MOA | .071 In/Sec | .306 G-s | |
| | MIH | .074 In/Sec | 1.795 G-s | |
| | MIP | .678 G-s | | |
| | MIV | .084 In/Sec | .684 G-s | |
| | MIA | .054 In/Sec | .567 G-s | |
| | | OVERALL LEVEL | 1K-20KHz | |
| | PIH | .170 In/Sec | 1.620 G-s | |
| | PIP | .248 G-s | | |
| | PIV | .187 In/Sec | .945 G-s | |
| | PIA | .179 In/Sec | .742 G-s | |
| ACN08 | - ACH Blend Tank | | (02-Aug-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .079 In/Sec | .131 G-s | 3575.0 RPM |
| | MOP | .0087 G-s | | |
| | MOV | .433 In/Sec | .057 G-s | |
| | MOA | .186 In/Sec | .045 G-s | |
| | MIH | .081 In/Sec | .220 G-s | |
| | MIP | .023 G-s | | |
| | MIV | .396 In/Sec | .083 G-s | |
| | MIA | .092 In/Sec | .042 G-s | |
| | | OVERALL LEVEL | 1K-20KHz | |
| | PIH | .051 In/Sec | .360 G-s | |
| | PIP | .102 G-s | | |
| | PIV | .099 In/Sec | .104 G-s | |
| | PIA | .068 In/Sec | .105 G-s | |
| ACN09 | - ACH Flash Tank Pump | | (02-Aug-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .106 In/Sec | .451 G-s | 3575.0 RPM |
| | MOP | .020 G-s | | |
| | MOV | .169 In/Sec | .214 G-s | |
| | MOA | .101 In/Sec | .201 G-s | |
| * | MIV | .068 In/Sec | .831 G-s | |
| * | MIA | .108 In/Sec | 1.139 G-s | |

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|---|---|---|---|---|
| | | OVERALL LEVEL | 1K-20KHz | |
| | PIH | .098 In/Sec | .230 G-s | |
| | PIP | .036 G-s | | |
| | PIV | .116 In/Sec | .248 G-s | |
| | PIA | .057 In/Sec | .170 G-s | |
| ACN10 | - #1 Kettle Circ Pmp | | (02-Aug-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .021 In/Sec | .502 G-s | 1775.0 RPM |
| | MOP | .243 G-s | | |
| | MOV | .030 In/Sec | .144 G-s | |
| | MOA | .027 In/Sec | .130 G-s | |
| | MIH | .018 In/Sec | .565 G-s | |
| | MIP | .315 G-s | | |
| | MIV | .024 In/Sec | .182 G-s | |
| | MIA | .032 In/Sec | .119 G-s | |
| | | OVERALL LEVEL | 1K-20KHz | |
| | PIH | .036 In/Sec | .296 G-s | |
| | PIP | .174 G-s | | |
| | PIV | .033 In/Sec | .120 G-s | |
| | PIA | .029 In/Sec | .069 G-s | |
| ACN11 | - #2 Kettle Circ Pump | | (02-Aug-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .023 In/Sec | .431 G-s | 1775.0 RPM |
| | MOP | .228 G-s | | |
| | MOV | .045 In/Sec | .131 G-s | |
| | MOA | .043 In/Sec | .087 G-s | |
| | MIH | .023 In/Sec | .655 G-s | |
| | MIP | .387 G-s | | |
| | MIV | .043 In/Sec | .131 G-s | |
| | MIA | .035 In/Sec | .088 G-s | |
| | | OVERALL LEVEL | 1K-20KHz | |
| | PIH | .038 In/Sec | .251 G-s | |
| | PIP | .130 G-s | | |
| | PIV | .039 In/Sec | .290 G-s | |
| | PIA | .033 In/Sec | .177 G-s | |
| * | POV | .104 In/Sec | .200 G-s | |
| * | POA | .038 In/Sec | .253 G-s | |
| ACN12 | - #1 Kettle Xfer Pump | | (02-Aug-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .048 In/Sec | .285 G-s | 3575.0 RPM |
| | MOP | .0085 G-s | | |
| | MOV | .114 In/Sec | .119 G-s | |
| | MOA | .076 In/Sec | .045 G-s | |
| | MIH | .052 In/Sec | .298 G-s | |
| | MIP | .031 G-s | | |
| | MIV | .076 In/Sec | .227 G-s | |
| | MIA | .060 In/Sec | .157 G-s | |
| | | OVERALL LEVEL | 1K-20KHz | |
| | PIH | .076 In/Sec | .189 G-s | |
| | PIP | .026 G-s | | |
| | PIV | .130 In/Sec | .172 G-s | |
| | PIA | .070 In/Sec | .150 G-s | |
| ACN13B | - #2 Kettle Xfer Pump S | | (02-Aug-21) | |

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|---|---|---|---|---|
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .044 In/Sec | .843 G-s | 3575.0 RPM |
| | MOP | .048 G-s | | |
| | MOV | .056 In/Sec | .246 G-s | |
| | MOA | .040 In/Sec | .200 G-s | |
| | MIH | .068 In/Sec | 2.913 G-s | |
| | MIP | .645 G-s | | |
| | MIV | .060 In/Sec | .617 G-s | |
| | MIA | .047 In/Sec | .729 G-s | |
| | | OVERALL LEVEL | 1K-20KHz | |
| | PIH | .060 In/Sec | .631 G-s | |
| | PIP | .112 G-s | | |
| | PIV | .065 In/Sec | .194 G-s | |
| | PIA | .071 In/Sec | .131 G-s | |

ACN14 - ACH Off Grade Pump (02-Aug-21)

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|---|---|---|---|---|
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .222 In/Sec | 2.658 G-s | 3575.0 RPM |
| | MOP | .561 G-s | | |
| | MOV | .138 In/Sec | .631 G-s | |
| | MOA | .409 In/Sec | .699 G-s | |
| | MIH | .273 In/Sec | 3.778 G-s | |
| | MIP | .182 G-s | | |
| | MIV | .308 In/Sec | .864 G-s | |
| | MIA | .307 In/Sec | 1.515 G-s | |
| | | OVERALL LEVEL | 1K-20KHz | |
| | PIH | .125 In/Sec | .637 G-s | |
| | PIP | .018 G-s | | |
| | PIV | .279 In/Sec | .243 G-s | |
| | PIA | .180 In/Sec | .271 G-s | |

ACN16 - ACH Scrb Circ PumpN (24-May-21)

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|---|---|---|---|---|
| | | OVERALL LEVEL | 1K-20KHz | |
| * | POV | .132 In/Sec | .412 G-s | 1780.0 RPM |
| * | POA | .202 In/Sec | .396 G-s | |

AC17 - Carrier Ref Unit (02-Aug-21)

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|---|---|---|---|---|
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .018 In/Sec | .172 G-s | 1780.0 RPM |
| | MOP | .023 G-s | | |
| | MOV | .024 In/Sec | .099 G-s | |
| | MOA | .015 In/Sec | .049 G-s | |
| | MIH | .028 In/Sec | .141 G-s | |
| | MIP | .025 G-s | | |
| | MIV | .021 In/Sec | .074 G-s | |
| | MIA | .016 In/Sec | .038 G-s | |
| | IIH | .197 In/Sec | | |
| | IIP | .914 G-s | | |
| | IIV | .146 In/Sec | | |
| | IIA | .106 In/Sec | | |
| | OOH | .160 In/Sec | | |
| | OOP | 1.587 G-s | | |
| | OOV | .051 In/Sec | | |
| | OOA | .090 In/Sec | | |
| | CIH | .136 In/Sec | | |
| | CIP | 2.837 G-s | | |
| | CIV | .141 In/Sec | | |

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|---|---|---|---|---|
| | CIA | .173 In/Sec | | |
| | COH | .083 In/Sec | | |
| | COP | .843 G-s | | |
| | COV | .129 In/Sec | | |
| | COA | .127 In/Sec | | |
| ACN17DP | - DP Comp | | (22-Jul-21) | |
| | | OVERALL LEVEL | | |
| | 21 | .030 Mils | | 1775.0 RPM |
| | 22 | .127 Mils | | |
| | 27 | .012 Mils | | |
| | 23 | .052 Mils | | |
| | 24 | .032 Mils | | |
| ACN23 | - ACH Scrb Circ Pump S | | (02-Aug-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .019 In/Sec | .335 G-s | 1780.0 RPM |
| | MOP | .164 G-s | | |
| | MOV | .041 In/Sec | .273 G-s | |
| | MOA | .030 In/Sec | .339 G-s | |
| | MIH | .019 In/Sec | .502 G-s | |
| | MIP | .293 G-s | | |
| | MIV | .047 In/Sec | .256 G-s | |
| | MIA | .027 In/Sec | .250 G-s | |
| | | OVERALL LEVEL | 1K-20KHz | |
| | PIH | .091 In/Sec | .319 G-s | |
| | PIP | .280 G-s | | |
| | PIV | .109 In/Sec | .153 G-s | |
| | PIA | .061 In/Sec | .110 G-s | |
| ACN28A | - ACN Fan W | | (22-Jul-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .124 In/Sec | .993 G-s | 1775.0 RPM |
| | MOP | .221 G-s | | |
| | MOV | .188 In/Sec | .403 G-s | |
| | MOA | .195 In/Sec | .098 G-s | |
| | MIH | .196 In/Sec | 2.058 G-s | |
| | MIP | .244 G-s | | |
| | MIV | .178 In/Sec | .690 G-s | |
| | MIA | .179 In/Sec | .187 G-s | |
| ACN28B | - ACN Fan E | | (22-Jul-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .232 In/Sec | .826 G-s | 1775.0 RPM |
| | MOP | .258 G-s | | |
| | MOV | .238 In/Sec | .651 G-s | |
| | MOA | .158 In/Sec | .145 G-s | |
| | MIH | .305 In/Sec | .700 G-s | |
| | MIP | .283 G-s | | |
| | MIV | .542 In/Sec | .262 G-s | |
| | MIA | .214 In/Sec | .187 G-s | |
| ACN28BDP | - Cooling Twr Fan E | | (22-Jul-21) | |
| | | OVERALL LEVEL | | |
| | 26 | .331 Mils | | 1775.0 RPM |
| ACN29A | - ACN Cool Twr Pump N | | (22-Jul-21) | |

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .058 In/Sec | .830 G-s | 1775.0 RPM |
| MOP | .147 G-s | | |
| MOV | .049 In/Sec | .353 G-s | |
| MOA | .042 In/Sec | .207 G-s | |
| MIH | .078 In/Sec | 1.273 G-s | |
| MIP | .170 G-s | | |
| MIV | .102 In/Sec | 1.457 G-s | |
| MIA | .078 In/Sec | .898 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .160 In/Sec | .802 G-s | |
| PIP | .322 G-s | | |
| PIV | .130 In/Sec | .242 G-s | |
| PIA | .119 In/Sec | .238 G-s | |
| POH | .082 In/Sec | 1.246 G-s | |
| POP | .776 G-s | | |
| POV | .086 In/Sec | .352 G-s | |
| POA | .120 In/Sec | .349 G-s | |

ACN28ADP - Cooling Twr Fan W (22-Jul-21)

| | | |
|---|---|---|
| | OVERALL LEVEL | |
| 28 | .234 Mils | 1775.0 RPM |

ACN29B - ACN Cool Twr Pump M (22-Jul-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .045 In/Sec | .808 G-s | 1775.0 RPM |
| MOP | .287 G-s | | |
| MOV | .056 In/Sec | .289 G-s | |
| MOA | .056 In/Sec | .205 G-s | |
| MIH | .074 In/Sec | 1.647 G-s | |
| MIP | .354 G-s | | |
| MIV | .064 In/Sec | 1.439 G-s | |
| MIA | .063 In/Sec | .721 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .134 In/Sec | .615 G-s | |
| PIP | .357 G-s | | |
| PIV | .078 In/Sec | .284 G-s | |
| PIA | .122 In/Sec | .223 G-s | |
| POH | .087 In/Sec | .912 G-s | |
| POP | .423 G-s | | |
| POV | .087 In/Sec | .239 G-s | |
| POA | .095 In/Sec | .213 G-s | |

ACN29C - ACN Cool Twr Pump S (22-Jul-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .042 In/Sec | .609 G-s | 1775.0 RPM |
| MOP | .291 G-s | | |
| MOV | .068 In/Sec | .171 G-s | |
| MOA | .037 In/Sec | .135 G-s | |
| MIH | .039 In/Sec | .522 G-s | |
| MIP | .216 G-s | | |
| MIV | .056 In/Sec | .341 G-s | |
| MIA | .037 In/Sec | .258 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .135 In/Sec | 1.078 G-s | |
| PIP | .561 G-s | | |
| PIV | .116 In/Sec | .971 G-s | |

| | | | |
|---|---|---|---|
| PIA | .125 In/Sec | .704 G-s | |
| POH | .115 In/Sec | 1.562 G-s | |
| POP | .333 G-s | | |
| POV | .082 In/Sec | .497 G-s | |
| POA | .102 In/Sec | .553 G-s | |

ACN30 - ACH Scrubber Xfer Pmp (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .051 In/Sec | .293 G-s | 1780.0 RPM |
| MOP | .194 G-s | | |
| MOV | .065 In/Sec | .205 G-s | |
| MOA | .133 In/Sec | .083 G-s | |
| MIH | .065 In/Sec | .589 G-s | |
| MIP | .337 G-s | | |
| MIV | .109 In/Sec | .297 G-s | |
| MIA | .111 In/Sec | .206 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .064 In/Sec | .124 G-s | |
| PIP | .083 G-s | | |
| PIV | .101 In/Sec | .171 G-s | |
| PIA | .054 In/Sec | .083 G-s | |
| POH | .056 In/Sec | .348 G-s | |
| POP | .271 G-s | | |
| POV | .087 In/Sec | .179 G-s | |
| POA | .055 In/Sec | .037 G-s | |

ACN36 - ACH Neut Tank Circ Pmp (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MIH | .077 In/Sec | .308 G-s | 3575.0 RPM |
| MIP | .068 G-s | | |
| MIV | .102 In/Sec | .130 G-s | |
| MIA | .107 In/Sec | .081 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .472 In/Sec | .179 G-s | |
| PIP | .032 G-s | | |
| PIV | .164 In/Sec | .276 G-s | |
| PIA | .154 In/Sec | .068 G-s | |

ACN44 - ACN Ref Unit Booster #3 (22-Jul-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .102 In/Sec | 1.564 G-s | 3575.0 RPM |
| MOP | .043 G-s | | |
| MOV | .091 In/Sec | .897 G-s | |
| MOA | .078 In/Sec | .666 G-s | |
| MIH | .165 In/Sec | .628 G-s | |
| MIP | .042 G-s | | |
| MIV | .128 In/Sec | .260 G-s | |
| MIA | .108 In/Sec | .317 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .106 In/Sec | .897 G-s | |
| PIP | .174 G-s | | |
| PIV | .142 In/Sec | .594 G-s | |
| PIA | .154 In/Sec | .409 G-s | |
| POH | .095 In/Sec | .493 G-s | |
| POP | .148 G-s | | |
| POV | .128 In/Sec | .479 G-s | |
| POA | .137 In/Sec | .344 G-s | |

MON 32A - ARC Reflux Pmp N (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| M1V | .177 In/Sec | .321 G-s | 3520.0 RPM |
| M1A | .074 In/Sec | .106 G-s | |
| M2H | .067 In/Sec | .397 G-s | |
| M2P | .065 G-s | | |
| M2V | .149 In/Sec | .199 G-s | |
| M2A | .069 In/Sec | .075 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| P1H | .070 In/Sec | .633 G-s | |
| P1P | .122 G-s | | |
| P1V | .099 In/Sec | .213 G-s | |
| P1A | .085 In/Sec | .156 G-s | |
| P2H | .096 In/Sec | .971 G-s | |
| P2P | .077 G-s | | |
| P2V | .103 In/Sec | .443 G-s | |
| P2A | .096 In/Sec | .323 G-s | |
| | OVERALL LEVEL | 1K-20kHz | |
| M1H | .080 In/Sec | 1.015 G-s | |
| M1P | .114 G-s | | |

MON 32B - ARC Reflux Pmp S (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| M1H | .051 In/Sec | .208 G-s | 3520.0 RPM |
| M1P | .048 G-s | | |
| M1V | .084 In/Sec | .210 G-s | |
| M1A | .051 In/Sec | .050 G-s | |
| M2H | .069 In/Sec | .338 G-s | |
| M2P | .088 G-s | | |
| M2V | .090 In/Sec | .133 G-s | |
| M2A | .080 In/Sec | .033 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| P1H | .310 In/Sec | .569 G-s | |
| P1P | .032 G-s | | |
| P1V | .248 In/Sec | .527 G-s | |
| P1A | .251 In/Sec | .949 G-s | |
| P2H | .145 In/Sec | .654 G-s | |
| P2P | .079 G-s | | |
| P2V | .168 In/Sec | .550 G-s | |
| P2A | .159 In/Sec | .252 G-s | |

MON36 - Irganox Mix/Feed Pump (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .056 In/Sec | .179 G-s | 1750.0 RPM |
| MOP | .052 G-s | | |
| MOV | .036 In/Sec | .088 G-s | |
| MOA | .044 In/Sec | .055 G-s | |
| * MIH | .059 In/Sec | .263 G-s | |
| * MIP | .185 G-s | | |
| * MIV | .050 In/Sec | .388 G-s | |
| * MIA | .053 In/Sec | .378 G-s | |
| IIH | .055 In/Sec | | |
| IIP | .204 G-s | | |
| IIV | .050 In/Sec | | |
| IIA | .047 In/Sec | | |
| | OVERALL LEVEL | 1K-20KHz | |

| | | | | |
|---|---|---|---|---|
| POH | .058 In/Sec | .549 G-s | | |
| POP | .424 G-s | | | |
| POV | .059 In/Sec | .654 G-s | | |
| POA | .075 In/Sec | .332 G-s | | |

MON38A - LBS Reflux Pmp S (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .046 In/Sec | .334 G-s | 3575.0 RPM |
| MOP | .048 G-s | | |
| MOV | .045 In/Sec | .173 G-s | |
| MOA | .039 In/Sec | .088 G-s | |
| MIH | .040 In/Sec | 1.034 G-s | |
| MIP | .107 G-s | | |
| MIV | .084 In/Sec | .166 G-s | |
| MIA | .049 In/Sec | .118 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .066 In/Sec | .786 G-s | |
| PIP | .160 G-s | | |
| PIV | .067 In/Sec | .536 G-s | |
| PIA | .080 In/Sec | .441 G-s | |

MON38B - LBS Reflux Pmp N (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .137 In/Sec | .586 G-s | 3575.0 RPM |
| MOP | .119 G-s | | |
| MOV | .113 In/Sec | .154 G-s | |
| MOA | .102 In/Sec | .140 G-s | |
| MIH | .110 In/Sec | .426 G-s | |
| MIP | .121 G-s | | |
| MIV | .205 In/Sec | .064 G-s | |
| MIA | .110 In/Sec | .083 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .145 In/Sec | .884 G-s | |
| PIP | .071 G-s | | |
| PIV | .158 In/Sec | .497 G-s | |
| PIA | .106 In/Sec | .279 G-s | |

MON38CNM - LBS Tails Pump N (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .094 In/Sec | .272 G-s | 3575.0 RPM |
| MOP | .025 G-s | | |
| MOV | .129 In/Sec | .142 G-s | |
| MOA | .110 In/Sec | .079 G-s | |
| MIH | .098 In/Sec | .340 G-s | |
| MIP | .062 G-s | | |
| MIV | .114 In/Sec | .141 G-s | |
| MIA | .101 In/Sec | .106 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .170 In/Sec | 1.545 G-s | |
| PIP | .087 G-s | | |
| PIV | .097 In/Sec | .827 G-s | |
| PIA | .103 In/Sec | .480 G-s | |

MON38CSM - LBS Tails Pump S (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .043 In/Sec | .342 G-s | 3575.0 RPM |
| MOP | .018 G-s | | |

| | | | |
|---|---|---|---|
| MOV | .049 In/Sec | .101 G-s | |
| MOA | .065 In/Sec | .055 G-s | |
| MIH | .046 In/Sec | .646 G-s | |
| MIP | .053 G-s | | |
| MIV | .051 In/Sec | .192 G-s | |
| MIA | .054 In/Sec | .082 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .091 In/Sec | .462 G-s | |
| PIP | .104 G-s | | |
| PIV | .091 In/Sec | .337 G-s | |
| PIA | .066 In/Sec | .174 G-s | |

MON40 - Acetone Pump (02-Aug-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .022 In/Sec | .927 G-s | 3575.0 RPM |
| MOP | .127 G-s | | |
| MOV | .045 In/Sec | .296 G-s | |
| MOA | .035 In/Sec | .192 G-s | |
| MIH | .027 In/Sec | 1.822 G-s | |
| MIP | .163 G-s | | |
| MIV | .036 In/Sec | .195 G-s | |
| MIA | .033 In/Sec | .104 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .128 In/Sec | .905 G-s | |
| PIP | .155 G-s | | |
| PIV | .108 In/Sec | .656 G-s | |
| PIA | .090 In/Sec | .359 G-s | |

MON43A - Amide Reactor Circ Pmp #1N (02-Aug-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .073 In/Sec | .269 G-s | 1785.0 RPM |
| MOP | .076 G-s | | |
| MOV | .103 In/Sec | .138 G-s | |
| MOA | .118 In/Sec | .080 G-s | |
| MIH | .091 In/Sec | .461 G-s | |
| MIP | .063 G-s | | |
| MIV | .113 In/Sec | .172 G-s | |
| MIA | .123 In/Sec | .219 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .255 In/Sec | .364 G-s | |
| PIP | .164 G-s | | |
| PIV | .212 In/Sec | .170 G-s | |
| PIA | .239 In/Sec | .125 G-s | |

MON43B - Amide Reactor Circ Pmp #2S (02-Aug-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .085 In/Sec | .224 G-s | 1785.0 RPM |
| MOP | .017 G-s | | |
| MOV | .265 In/Sec | .081 G-s | |
| MOA | .087 In/Sec | .147 G-s | |
| MIH | .120 In/Sec | .085 G-s | |
| MIP | .011 G-s | | |
| MIV | .337 In/Sec | .035 G-s | |
| MIA | .088 In/Sec | .024 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .326 In/Sec | .273 G-s | |
| PIP | .140 G-s | | |

| | | | | |
|---|---|---|---|---|
| PIV | .240 In/Sec | .164 G-s | | |
| PIA | .201 In/Sec | .124 G-s | | |

MON45WM - ACH Ref Brine Pump W (22-Jul-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .057 In/Sec | 1.826 G-s | 1750.0 RPM |
| MOP | .616 G-s | | |
| MOV | .138 In/Sec | .723 G-s | |
| MOA | .119 In/Sec | .262 G-s | |
| MIH | .055 In/Sec | 1.091 G-s | |
| MIP | .635 G-s | | |
| MIV | .101 In/Sec | .605 G-s | |
| MIA | .131 In/Sec | .326 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .277 In/Sec | .748 G-s | |
| PIP | .446 G-s | | |
| PIV | .130 In/Sec | .439 G-s | |
| PIA | .141 In/Sec | .360 G-s | |
| POH | .141 In/Sec | 1.302 G-s | |
| POP | .736 G-s | | |
| POV | .118 In/Sec | .570 G-s | |
| POA | .079 In/Sec | .324 G-s | |

MON50 - Decanter Feed Pump (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .044 In/Sec | .467 G-s | 3575.0 RPM |
| MOP | .092 G-s | | |
| MOV | .108 In/Sec | .322 G-s | |
| MOA | .131 In/Sec | .152 G-s | |
| MIH | .051 In/Sec | .621 G-s | |
| MIP | .154 G-s | | |
| MIV | .121 In/Sec | .372 G-s | |
| MIA | .131 In/Sec | .135 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .292 In/Sec | .735 G-s | |
| PIP | .140 G-s | | |
| PIV | .222 In/Sec | .291 G-s | |
| PIA | .199 In/Sec | .685 G-s | |

MON55NM - HUT Pump N (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .032 In/Sec | .349 G-s | 1775.0 RPM |
| MOP | .136 G-s | | |
| MOV | .043 In/Sec | .265 G-s | |
| MOA | .049 In/Sec | .183 G-s | |
| MIH | .039 In/Sec | .449 G-s | |
| MIP | .327 G-s | | |
| MIV | .057 In/Sec | .258 G-s | |
| MIA | .038 In/Sec | .294 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .135 In/Sec | .201 G-s | |
| PIP | .125 G-s | | |
| PIV | .118 In/Sec | .133 G-s | |
| PIA | .116 In/Sec | .067 G-s | |
| POH | .078 In/Sec | .270 G-s | |
| POP | .155 G-s | | |
| POV | .096 In/Sec | .097 G-s | |

| | | | | |
|---|---|---|---|---|
| POA | .107 In/Sec | .117 G-s | | |

MON55MM - HUT Pump Mid (02-Aug-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .076 In/Sec | .498 G-s | 1775.0 RPM |
| MOP | .301 G-s | | |
| MOV | .065 In/Sec | .237 G-s | |
| MOA | .061 In/Sec | .186 G-s | |
| MIH | .057 In/Sec | .731 G-s | |
| MIP | .409 G-s | | |
| MIV | .083 In/Sec | .413 G-s | |
| MIA | .056 In/Sec | .437 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .183 In/Sec | .712 G-s | |
| PIP | .362 G-s | | |
| PIV | .133 In/Sec | .283 G-s | |
| PIA | .158 In/Sec | .178 G-s | |
| POH | .102 In/Sec | .838 G-s | |
| POP | .520 G-s | | |
| POV | .126 In/Sec | .286 G-s | |
| POA | .136 In/Sec | .180 G-s | |

MON55SM - HUT Pump S (02-Aug-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .035 In/Sec | 1.825 G-s | 1775.0 RPM |
| MOP | 1.189 G-s | | |
| MOV | .050 In/Sec | .836 G-s | |
| MOA | .042 In/Sec | .361 G-s | |
| MIH | .031 In/Sec | 2.050 G-s | |
| MIP | 1.000 G-s | | |
| MIV | .044 In/Sec | .840 G-s | |
| MIA | .039 In/Sec | .270 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .168 In/Sec | .842 G-s | |
| PIP | .478 G-s | | |
| PIV | .110 In/Sec | .375 G-s | |
| PIA | .097 In/Sec | .380 G-s | |
| POH | .106 In/Sec | .739 G-s | |
| POP | .303 G-s | | |
| POV | .110 In/Sec | .290 G-s | |
| POA | .117 In/Sec | .282 G-s | |

MON56 - Inhibited Mon Xfer Pump E (22-Jul-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .058 In/Sec | .475 G-s | 3575.0 RPM |
| MOP | .026 G-s | | |
| MOV | .041 In/Sec | .067 G-s | |
| MOA | .053 In/Sec | .148 G-s | |
| MIH | .075 In/Sec | .527 G-s | |
| MIP | .105 G-s | | |
| MIV | .039 In/Sec | .164 G-s | |
| MIA | .055 In/Sec | .118 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .188 In/Sec | 1.121 G-s | |
| PIP | .132 G-s | | |
| PIV | .090 In/Sec | .372 G-s | |
| PIA | .099 In/Sec | .331 G-s | |

MON 63E - LBS Side Stream Pump E (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| M1H | .127 In/Sec | .864 G-s | 3515.0 RPM |
| M1P | .018 G-s | | |
| M1V | .096 In/Sec | .221 G-s | |
| M1A | .123 In/Sec | .267 G-s | |
| M2H | .062 In/Sec | .860 G-s | |
| M2P | .064 G-s | | |
| M2V | .127 In/Sec | .244 G-s | |
| M2A | .140 In/Sec | .117 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| P1H | .258 In/Sec | .516 G-s | |
| P1P | .045 G-s | | |
| P1V | .142 In/Sec | .359 G-s | |
| P1A | .193 In/Sec | .329 G-s | |
| P2H | .222 In/Sec | .566 G-s | |
| P2P | .047 G-s | | |
| P2V | .103 In/Sec | .369 G-s | |
| P2A | .159 In/Sec | .391 G-s | |

MON 63W - LBS Side Stream Pump W (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| M1H | .073 In/Sec | .988 G-s | 3515.0 RPM |
| M1P | .042 G-s | | |
| M1V | .085 In/Sec | .758 G-s | |
| M1A | .087 In/Sec | .847 G-s | |
| M2H | .100 In/Sec | 2.333 G-s | |
| M2P | .102 G-s | | |
| M2V | .132 In/Sec | .749 G-s | |
| M2A | .074 In/Sec | .406 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| P1H | .159 In/Sec | .514 G-s | |
| P1P | .091 G-s | | |
| P1V | .103 In/Sec | .838 G-s | |
| P1A | .146 In/Sec | .569 G-s | |
| P2H | .142 In/Sec | .565 G-s | |
| P2P | .092 G-s | | |
| P2V | .107 In/Sec | .792 G-s | |
| P2A | .141 In/Sec | .720 G-s | |

MON65 - Amide Reactor Circ Primary (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .207 In/Sec | .380 G-s | 1180.0 RPM |
| MOP | .180 G-s | | |
| MOV | .413 In/Sec | .175 G-s | |
| MOA | .105 In/Sec | .091 G-s | |
| MIH | .190 In/Sec | .548 G-s | |
| MIP | .283 G-s | | |
| MIV | .343 In/Sec | .085 G-s | |
| MIA | .101 In/Sec | .114 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .165 In/Sec | .160 G-s | |
| PIP | .112 G-s | | |
| PIV | .145 In/Sec | .088 G-s | |
| PIA | .083 In/Sec | .066 G-s | |

MON67SM - PTZ Xfer Pump S (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .145 In/Sec | .677 G-s | 3575.0 RPM |
| MOP | .0043 G-s | | |
| MOV | .153 In/Sec | .162 G-s | |
| MOA | .139 In/Sec | .084 G-s | |
| MIH | .155 In/Sec | .394 G-s | |
| MIP | .065 G-s | | |
| MIV | .153 In/Sec | .055 G-s | |
| MIA | .153 In/Sec | .037 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .056 In/Sec | .497 G-s | |
| PIP | .044 G-s | | |
| PIV | .044 In/Sec | .336 G-s | |
| PIA | .042 In/Sec | .263 G-s | |

MON68A - #1 Reactor H2O Circ Pump (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .074 In/Sec | .300 G-s | 1180.0 RPM |
| MOP | .085 G-s | | |
| MOV | .046 In/Sec | .091 G-s | |
| MOA | .078 In/Sec | .030 G-s | |
| MIH | .069 In/Sec | .140 G-s | |
| MIP | .069 G-s | | |
| MIV | .060 In/Sec | .083 G-s | |
| MIA | .070 In/Sec | .045 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .047 In/Sec | .189 G-s | |
| PIP | .122 G-s | | |
| PIV | .047 In/Sec | .245 G-s | |
| PIA | .054 In/Sec | .151 G-s | |

MON73W - Skim Tub Xfer Pmp W (22-Jul-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .050 In/Sec | .238 G-s | 1010.0 RPM |
| MOP | .058 G-s | | |
| MOV | .059 In/Sec | .265 G-s | |
| MOA | .082 In/Sec | .084 G-s | |
| MIH | .041 In/Sec | .614 G-s | |
| MIP | .317 G-s | | |
| MIV | .055 In/Sec | .307 G-s | |
| MIA | .056 In/Sec | .472 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .043 In/Sec | .075 G-s | |
| PIP | .039 G-s | | |
| PIV | .036 In/Sec | .055 G-s | |
| PIA | .030 In/Sec | .053 G-s | |

MON81 - Uninhibited Mon Tank Pump S (22-Jul-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .047 In/Sec | .207 G-s | 3575.0 RPM |
| MOP | .012 G-s | | |
| MOV | .029 In/Sec | .128 G-s | |
| MOA | .040 In/Sec | .039 G-s | |
| MIH | .049 In/Sec | .219 G-s | |
| MIP | .048 G-s | | |
| MIV | .027 In/Sec | .083 G-s | |

| | | | |
|---|---|---|---|
| MIA | .032 In/Sec | .078 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .098 In/Sec | .641 G-s | |
| PIP | .059 G-s | | |
| PIV | .085 In/Sec | .453 G-s | |
| PIA | .050 In/Sec | .224 G-s | |
| POH | .082 In/Sec | .474 G-s | |
| POP | .043 G-s | | |
| POV | .070 In/Sec | .164 G-s | |
| POA | .072 In/Sec | .209 G-s | |

MON80 - Uninhibited Mon Tank Pump N (22-Jul-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .060 In/Sec | .123 G-s | 3575.0 RPM |
| MOP | .0078 G-s | | |
| MOV | .052 In/Sec | .271 G-s | |
| MOA | .131 In/Sec | .073 G-s | |
| MIH | .146 In/Sec | .139 G-s | |
| MIP | .015 G-s | | |
| MIV | .120 In/Sec | .070 G-s | |
| MIA | .112 In/Sec | .017 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .167 In/Sec | .088 G-s | |
| PIP | .0073 G-s | | |
| PIV | .042 In/Sec | .100 G-s | |
| PIA | .073 In/Sec | .080 G-s | |
| POH | .126 In/Sec | .089 G-s | |
| POP | .0068 G-s | | |
| POV | .049 In/Sec | .125 G-s | |
| POA | .082 In/Sec | .043 G-s | |

MON84 - WCM Tails Pump S (02-Aug-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .044 In/Sec | .409 G-s | 3575.0 RPM |
| MOP | .043 G-s | | |
| MOV | .084 In/Sec | .060 G-s | |
| MOA | .164 In/Sec | .076 G-s | |
| MIH | .065 In/Sec | 1.072 G-s | |
| MIP | .079 G-s | | |
| MIV | .108 In/Sec | .125 G-s | |
| MIA | .152 In/Sec | .111 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .107 In/Sec | .902 G-s | |
| PIP | .096 G-s | | |
| PIV | .118 In/Sec | .480 G-s | |
| PIA | .121 In/Sec | .389 G-s | |

MON85E - Water Treatment Pmp E (22-Jul-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .130 In/Sec | .262 G-s | 1775.0 RPM |
| MOP | .087 G-s | | |
| MOV | .076 In/Sec | .126 G-s | |
| MOA | .133 In/Sec | .042 G-s | |
| MIH | .146 In/Sec | .372 G-s | |
| MIP | .154 G-s | | |
| MIV | .171 In/Sec | .164 G-s | |
| MIA | .112 In/Sec | .175 G-s | |

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .274 In/Sec | .562 G-s | |
| PIP | .312 G-s | | |
| PIV | .095 In/Sec | .281 G-s | |
| PIA | .152 In/Sec | .151 G-s | |
| POH | .249 In/Sec | .475 G-s | |
| POP | .339 G-s | | |
| POV | .103 In/Sec | .285 G-s | |
| POA | .147 In/Sec | .147 G-s | |

MON85W - Water Treatment Pmp W (22-Jul-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .067 In/Sec | .427 G-s | 1775.0 RPM |
| MOP | .078 G-s | | |
| MOV | .097 In/Sec | .099 G-s | |
| MOA | .083 In/Sec | .171 G-s | |
| MIH | .069 In/Sec | .597 G-s | |
| MIP | .337 G-s | | |
| MIV | .102 In/Sec | .317 G-s | |
| MIA | .076 In/Sec | .403 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .096 In/Sec | .871 G-s | |
| PIP | .568 G-s | | |
| PIV | .110 In/Sec | .366 G-s | |
| PIA | .084 In/Sec | .237 G-s | |
| POH | .103 In/Sec | .897 G-s | |
| POP | .570 G-s | | |
| POV | .113 In/Sec | .386 G-s | |
| POA | .085 In/Sec | .255 G-s | |

MON118 - Tempered H20 Pmp (02-Aug-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .058 In/Sec | .231 G-s | 865.0 RPM |
| MOP | .130 G-s | | |
| MOV | .026 In/Sec | .147 G-s | |
| MOA | .041 In/Sec | .041 G-s | |
| MIH | .049 In/Sec | .151 G-s | |
| MIP | .072 G-s | | |
| MIV | .025 In/Sec | .117 G-s | |
| MIA | .040 In/Sec | .115 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .046 In/Sec | .050 G-s | |
| PIP | .027 G-s | | |
| PIV | .026 In/Sec | .065 G-s | |
| PIA | .030 In/Sec | .042 G-s | |
| POH | .034 In/Sec | .059 G-s | |
| POP | .029 G-s | | |
| POV | .021 In/Sec | .058 G-s | |
| POA | .028 In/Sec | .041 G-s | |

MON168 - A/B Booster Pump E (22-Jul-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .076 In/Sec | .374 G-s | 1020.0 RPM |
| MOP | .159 G-s | | |
| MOV | .028 In/Sec | .103 G-s | |
| MOA | .043 In/Sec | .083 G-s | |
| MIH | .060 In/Sec | .174 G-s | |

| | | | | |
|---|---|---|---|---|
| | MIP | .077 G-s | | |
| | MIV | .036 In/Sec | .091 G-s | |
| | MIA | .047 In/Sec | .034 G-s | |
| | | OVERALL LEVEL | 1K-20KHz | |
| | PIH | .063 In/Sec | .173 G-s | |
| | PIP | .077 G-s | | |
| | PIV | .035 In/Sec | .099 G-s | |
| | PIA | .046 In/Sec | .042 G-s | |
| SAR03 | - Turb Comp Main Blower | | (22-Jul-21) | |
| | | OVERALL LEVEL | | |
| | 5 | .303 Mils | | 3808.0 RPM |
| | 6 | .248 Mils | | |
| | 7 | .223 Mils | | |
| | 8 | .345 Mils | | |
| | 9 | .823 Mils | | |
| | 10 | .699 Mils | | |
| | 11 | .768 Mils | | |
| | 12 | .805 Mils | | |
| | 15 | .033 Mils | | |
| | 16 | .053 Mils | | |
| SAR10 | - Process Air Fan E | | (20-Jul-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .303 In/Sec | .505 G-s | 1775.0 RPM |
| | MOP | .302 G-s | | |
| | MOV | .075 In/Sec | .292 G-s | |
| | MOA | .140 In/Sec | .189 G-s | |
| | MIH | .195 In/Sec | 1.184 G-s | |
| | MIP | .763 G-s | | |
| | MIV | .136 In/Sec | .514 G-s | |
| | MIA | .124 In/Sec | .319 G-s | |
| | | OVERALL LEVEL | 1K-20KHz | |
| | FIH | .352 In/Sec | 3.913 G-s | |
| | FIP | 2.148 G-s | | |
| | FIV | .184 In/Sec | 1.799 G-s | |
| | FIA | .216 In/Sec | .991 G-s | |
| | FOH | .327 In/Sec | 2.809 G-s | |
| | FOP | 1.584 G-s | | |
| | FOV | .292 In/Sec | 1.005 G-s | |
| | FOA | .387 In/Sec | .710 G-s | |
| SAR11 | - Recycle Fan W | | (20-Jul-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .038 In/Sec | .161 G-s | 1775.0 RPM |
| | MOP | .061 G-s | | |
| | MOV | .056 In/Sec | .060 G-s | |
| | MOA | .052 In/Sec | .043 G-s | |
| | MIH | .027 In/Sec | .676 G-s | |
| | MIP | .440 G-s | | |
| | MIV | .052 In/Sec | .302 G-s | |
| | MIA | .055 In/Sec | .124 G-s | |
| | | OVERALL LEVEL | 1K-20KHz | |
| | FIH | .017 In/Sec | .020 G-s | |
| | FIP | .012 G-s | | |
| | FIV | .013 In/Sec | .013 G-s | |
| | FIA | .020 In/Sec | .0045 G-s | |

| | | | |
|---|---|---|---|
| FOH | .021 In/Sec | .020 G-s | |
| FOP | .0095 G-s | | |
| FOV | .018 In/Sec | .014 G-s | |
| FOA | .027 In/Sec | .0080 G-s | |

SAR12 - Recycle Fan E (20-Jul-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .028 In/Sec | .086 G-s | 1775.0 RPM |
| MOP | .014 G-s | | |
| MOV | .042 In/Sec | .099 G-s | |
| MOA | .103 In/Sec | .056 G-s | |
| MIH | .035 In/Sec | .948 G-s | |
| MIP | .549 G-s | | |
| MIV | .078 In/Sec | .455 G-s | |
| MIA | .059 In/Sec | .201 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| FIH | .039 In/Sec | .116 G-s | |
| FIP | .067 G-s | | |
| FIV | .019 In/Sec | .071 G-s | |
| FIA | .030 In/Sec | .089 G-s | |
| FOH | .045 In/Sec | .235 G-s | |
| FOP | .053 G-s | | |
| FOV | .037 In/Sec | .160 G-s | |
| FOA | .037 In/Sec | .380 G-s | |

SAR13 - Combustion Air Fan E (20-Jul-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .062 In/Sec | .580 G-s | 1020.0 RPM |
| MOP | .352 G-s | | |
| MOV | .041 In/Sec | .654 G-s | |
| MOA | .035 In/Sec | .238 G-s | |
| MIH | .068 In/Sec | 1.034 G-s | |
| MIP | .158 G-s | | |
| MIV | .075 In/Sec | .192 G-s | |
| MIA | .046 In/Sec | .200 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| FIH | .055 In/Sec | .208 G-s | |
| FIP | .089 G-s | | |
| FIV | .109 In/Sec | .336 G-s | |
| FIA | .064 In/Sec | .218 G-s | |
| FOH | .088 In/Sec | .332 G-s | |
| FOP | .075 G-s | | |
| FOV | .073 In/Sec | .093 G-s | |
| FOA | .091 In/Sec | .062 G-s | |

SAR14 - Combustion Air Fan W (20-Jul-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .098 In/Sec | 1.251 G-s | 1020.0 RPM |
| MOP | .229 G-s | | |
| MOV | .064 In/Sec | .856 G-s | |
| MOA | .053 In/Sec | .268 G-s | |
| MIH | .091 In/Sec | 1.781 G-s | |
| MIP | .911 G-s | | |
| MIV | .073 In/Sec | 1.069 G-s | |
| MIA | .046 In/Sec | .722 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| FIH | .098 In/Sec | 1.797 G-s | |

| | | | | |
|---|---|---|---|---|
| FIP | .903 G-s | | | |
| FIV | .033 In/Sec | .540 G-s | | |
| FIA | .087 In/Sec | .197 G-s | | |
| FOH | .114 In/Sec | .879 G-s | | |
| FOP | .621 G-s | | | |
| FOV | .057 In/Sec | .434 G-s | | |
| FOA | .060 In/Sec | .303 G-s | | |

SAR15 - Process Air Fan W (20-Jul-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .071 In/Sec | .395 G-s | 1180.0 RPM |
| MOP | .152 G-s | | |
| MOV | .063 In/Sec | .372 G-s | |
| MOA | .067 In/Sec | .153 G-s | |
| MIH | .064 In/Sec | .945 G-s | |
| MIP | .292 G-s | | |
| MIV | .057 In/Sec | .435 G-s | |
| MIA | .053 In/Sec | .448 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| FIH | .065 In/Sec | .363 G-s | |
| FIP | .215 G-s | | |
| FIV | .033 In/Sec | .460 G-s | |
| FIA | .046 In/Sec | .397 G-s | |
| FOH | .072 In/Sec | .989 G-s | |
| FOP | .628 G-s | | |
| FOV | .040 In/Sec | .654 G-s | |
| FOA | .036 In/Sec | .285 G-s | |

SAR37B - Interpass Twr Circ Pump S (20-Jul-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .088 In/Sec | 1.108 G-s | 1775.0 RPM |
| MOP | .450 G-s | | |
| MOV | .121 In/Sec | .589 G-s | |
| MOA | .098 In/Sec | .437 G-s | |
| MIH | .078 In/Sec | 1.823 G-s | |
| MIP | .832 G-s | | |
| MIV | .078 In/Sec | .733 G-s | |
| MIA | .069 In/Sec | .242 G-s | |

SAR39A - Boiler Feed H2O Pmp NW (23-Jul-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .057 In/Sec | .589 G-s | 3575.0 RPM |
| MOP | .016 G-s | | |
| MOV | .080 In/Sec | .197 G-s | |
| MOA | .086 In/Sec | .081 G-s | |
| MIH | .080 In/Sec | .876 G-s | |
| MIP | .021 G-s | | |
| MIV | .095 In/Sec | .283 G-s | |
| MIA | .083 In/Sec | .139 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .074 In/Sec | .483 G-s | |
| PIP | .101 G-s | | |
| PIV | .109 In/Sec | .183 G-s | |
| PIA | .052 In/Sec | .116 G-s | |
| POH | .135 In/Sec | .567 G-s | |
| POP | .103 G-s | | |
| POV | .075 In/Sec | .315 G-s | |

| | | | | |
|---|---|---|---|---|
| POA | .061 In/Sec | .199 G-s | | |

SAR39B - Boiler Feed H2O Pmp SW (20-Jul-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .046 In/Sec | .704 G-s | 3575.0 RPM |
| MOP | .112 G-s | | |
| MOV | .057 In/Sec | .543 G-s | |
| MOA | .038 In/Sec | .358 G-s | |
| MIH | .053 In/Sec | 1.491 G-s | |
| MIP | .135 G-s | | |
| MIV | .031 In/Sec | .413 G-s | |
| MIA | .041 In/Sec | 1.174 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .057 In/Sec | .350 G-s | |
| PIP | .055 G-s | | |
| PIV | .086 In/Sec | .389 G-s | |
| PIA | .064 In/Sec | .200 G-s | |
| POH | .033 In/Sec | .347 G-s | |
| POP | .108 G-s | | |
| POV | .058 In/Sec | .356 G-s | |
| POA | .068 In/Sec | .121 G-s | |

SAR39C - Boiler Feed H2O Pmp NE (03-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .246 In/Sec | .693 G-s | 3575.0 RPM |
| MOP | .018 G-s | | |
| MOV | .071 In/Sec | .298 G-s | |
| MOA | .054 In/Sec | .787 G-s | |
| MIH | .182 In/Sec | .560 G-s | |
| MIP | .021 G-s | | |
| MIV | .095 In/Sec | .366 G-s | |
| MIA | .056 In/Sec | .077 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .125 In/Sec | .372 G-s | |
| PIP | .025 G-s | | |
| PIV | .112 In/Sec | .166 G-s | |
| PIA | .115 In/Sec | .176 G-s | |
| POH | .221 In/Sec | .992 G-s | |
| POP | .133 G-s | | |
| POV | .103 In/Sec | .342 G-s | |
| POA | .069 In/Sec | .154 G-s | |

SAR39D - Boiler Feed H2O Pmp SE (20-Jul-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .084 In/Sec | 1.870 G-s | 3575.0 RPM |
| MOP | .043 G-s | | |
| MOV | .071 In/Sec | .381 G-s | |
| MOA | .036 In/Sec | .512 G-s | |
| MIH | .034 In/Sec | .992 G-s | |
| MIP | .150 G-s | | |
| MIV | .054 In/Sec | .351 G-s | |
| MIA | .038 In/Sec | .761 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .048 In/Sec | .133 G-s | |
| PIP | .012 G-s | | |
| PIV | .052 In/Sec | .027 G-s | |
| PIA | .029 In/Sec | .017 G-s | |

| | | | | |
|---|---|---|---|---|
| | POH | .045 In/Sec | .139 G-s | |
| | POP | .011 G-s | | |
| | POV | .041 In/Sec | .023 G-s | |
| | POA | .028 In/Sec | .015 G-s | |
| SAR50A | - Drying Tower Circ Pump W | | (03-Aug-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .205 In/Sec | .762 G-s | 1775.0 RPM |
| | MOP | .072 G-s | | |
| | MOV | .295 In/Sec | .114 G-s | |
| | MOA | .099 In/Sec | .067 G-s | |
| | MIH | .116 In/Sec | .994 G-s | |
| | MIP | .151 G-s | | |
| | MIV | .158 In/Sec | .379 G-s | |
| | MIA | .107 In/Sec | .238 G-s | |
| | | OVERALL LEVEL | 1K-20KHz | |
| * | PIV | .129 In/Sec | .0021 G-s | |
| | | OVERALL LEVEL | 1K-20kHz | |
| * | PIA | .783 In/Sec | .0024 G-s | |
| SAR50B | - Drying Tower Circ Pump E | | (20-Jul-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .058 In/Sec | 1.016 G-s | 1775.0 RPM |
| | MOP | .539 G-s | | |
| | MOV | .107 In/Sec | .398 G-s | |
| | MOA | .061 In/Sec | .170 G-s | |
| | MIH | .038 In/Sec | .607 G-s | |
| | MIP | .310 G-s | | |
| | MIV | .083 In/Sec | .135 G-s | |
| | MIA | .069 In/Sec | .123 G-s | |
| | | OVERALL LEVEL | 1K-20KHz | |
| * | POV | .108 In/Sec | .283 G-s | |
| * | POA | .192 In/Sec | .208 G-s | |
| SAR55A | - Neutralization Pump N | | (20-Jul-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .068 In/Sec | .313 G-s | 3575.0 RPM |
| | MOP | .047 G-s | | |
| | MOV | .189 In/Sec | .051 G-s | |
| | MOA | .177 In/Sec | .126 G-s | |
| | MIH | .114 In/Sec | 3.082 G-s | |
| | MIP | 1.969 G-s | | |
| | MIV | .125 In/Sec | .479 G-s | |
| | MIA | .117 In/Sec | .369 G-s | |
| | | OVERALL LEVEL | 1K-20KHz | |
| | PIH | .111 In/Sec | .297 G-s | |
| | PIP | .044 G-s | | |
| | PIV | .067 In/Sec | .158 G-s | |
| | PIA | .039 In/Sec | .240 G-s | |
| SAR59A | - Scrub Twr Circ Pmp W | | (20-Jul-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .027 In/Sec | .331 G-s | 1775.0 RPM |
| | MOP | .159 G-s | | |
| | MOV | .039 In/Sec | .121 G-s | |
| | MOA | .031 In/Sec | .220 G-s | |
| | MIH | .023 In/Sec | .360 G-s | |

| | | | |
|---|---|---|---|
| MIP | .226 G-s | | |
| MIV | .030 In/Sec | .193 G-s | |
| MIA | .031 In/Sec | .152 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .097 In/Sec | .416 G-s | |
| PIP | .239 G-s | | |
| PIV | .069 In/Sec | .313 G-s | |
| PIA | .086 In/Sec | .194 G-s | |
| POH | .079 In/Sec | .434 G-s | |
| POP | .235 G-s | | |
| POV | .071 In/Sec | .215 G-s | |
| POA | .072 In/Sec | .138 G-s | |

SAR59B - Scrub Twr Circ Pmp M (20-Jul-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .049 In/Sec | .591 G-s | 1775.0 RPM |
| MOP | .196 G-s | | |
| MOV | .066 In/Sec | .295 G-s | |
| MOA | .069 In/Sec | .103 G-s | |
| MIH | .057 In/Sec | 1.055 G-s | |
| MIP | .606 G-s | | |
| MIV | .075 In/Sec | .702 G-s | |
| MIA | .051 In/Sec | .520 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .186 In/Sec | .567 G-s | |
| PIP | .371 G-s | | |
| PIV | .085 In/Sec | .388 G-s | |
| PIA | .097 In/Sec | .222 G-s | |
| POH | .132 In/Sec | .332 G-s | |
| POP | .192 G-s | | |
| POV | .080 In/Sec | .146 G-s | |
| POA | .101 In/Sec | .133 G-s | |

SAR59C - Scrub Twr Circ Pmp E (20-Jul-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .022 In/Sec | .226 G-s | 1775.0 RPM |
| MOP | .047 G-s | | |
| MOV | .035 In/Sec | .076 G-s | |
| MOA | .030 In/Sec | .072 G-s | |
| MIH | .027 In/Sec | .676 G-s | |
| MIP | .305 G-s | | |
| MIV | .030 In/Sec | .203 G-s | |
| MIA | .025 In/Sec | .067 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .083 In/Sec | .534 G-s | |
| PIP | .295 G-s | | |
| PIV | .049 In/Sec | .256 G-s | |
| PIA | .053 In/Sec | .175 G-s | |
| POH | .111 In/Sec | .304 G-s | |
| POP | .169 G-s | | |
| POV | .063 In/Sec | .180 G-s | |
| POA | .075 In/Sec | .134 G-s | |

SAR54C - Weak Acid Xfer Pump S (20-Jul-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .070 In/Sec | .110 G-s | 3575.0 RPM |
| MOP | .019 G-s | | |

| | | | |
|---|---|---|---|
| MOV | .061 In/Sec | .048 G-s | |
| MOA | .033 In/Sec | .035 G-s | |
| MIH | .070 In/Sec | .152 G-s | |
| MIP | .032 G-s | | |
| MIV | .053 In/Sec | .056 G-s | |
| MIA | .028 In/Sec | .047 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .108 In/Sec | .554 G-s | |
| PIP | .020 G-s | | |
| PIV | .054 In/Sec | .168 G-s | |
| PIA | .076 In/Sec | .140 G-s | |

SAR54B - Weak Acid Xfer Pump N (20-Jul-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .110 In/Sec | .226 G-s | 3575.0 RPM |
| MOP | .066 G-s | | |
| MOV | .093 In/Sec | .152 G-s | |
| MOA | .055 In/Sec | .090 G-s | |
| MIH | .156 In/Sec | .326 G-s | |
| MIP | .047 G-s | | |
| MIV | .049 In/Sec | .126 G-s | |
| MIA | .105 In/Sec | .073 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .102 In/Sec | .595 G-s | |
| PIP | .128 G-s | | |
| PIV | .085 In/Sec | .746 G-s | |
| PIA | .086 In/Sec | .429 G-s | |

SAR 56A - N Oleum Storage Tank Feed (20-Jul-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| M1H | .076 In/Sec | .149 G-s | 1775.0 RPM |
| M1P | .025 G-s | | |
| M1V | .055 In/Sec | .051 G-s | |
| M1A | .072 In/Sec | .028 G-s | |
| M2H | .067 In/Sec | .212 G-s | |
| M2P | .118 G-s | | |
| M2V | .039 In/Sec | .053 G-s | |
| M2A | .049 In/Sec | .050 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| P1H | .066 In/Sec | .088 G-s | |
| P1P | .072 G-s | | |
| P1V | .046 In/Sec | .061 G-s | |
| P1A | .050 In/Sec | .045 G-s | |
| P2H | .055 In/Sec | .097 G-s | |
| P2P | .056 G-s | | |
| P2V | .046 In/Sec | .052 G-s | |
| P2A | .051 In/Sec | .045 G-s | |

SAR 56B - M Oleum Storage Tank Feed (20-Jul-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| M1H | .128 In/Sec | .438 G-s | 1775.0 RPM |
| M1P | .061 G-s | | |
| M1V | .130 In/Sec | .090 G-s | |
| M1A | .236 In/Sec | .052 G-s | |
| M2H | .130 In/Sec | .295 G-s | |
| M2P | .125 G-s | | |
| M2V | .105 In/Sec | .098 G-s | |

| | | | |
|---|---|---|---|
| M2A | .179 In/Sec | .050 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| P1H | .147 In/Sec | .287 G-s | |
| P1P | .238 G-s | | |
| P1V | .069 In/Sec | .199 G-s | |
| P1A | .049 In/Sec | .133 G-s | |
| P2H | .078 In/Sec | .167 G-s | |
| P2P | .041 G-s | | |
| P2V | .072 In/Sec | .057 G-s | |
| P2A | .057 In/Sec | .028 G-s | |

SAR 56C - S Oleum Storage Tank Feed (20-Jul-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| M1H | .024 In/Sec | .175 G-s | 1775.0 RPM |
| M1P | .068 G-s | | |
| M1V | .041 In/Sec | .436 G-s | |
| M1A | .021 In/Sec | .088 G-s | |
| M2H | .040 In/Sec | .226 G-s | |
| M2P | .192 G-s | | |
| M2V | .038 In/Sec | .238 G-s | |
| M2A | .035 In/Sec | .120 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| P1H | .073 In/Sec | .177 G-s | |
| P1P | .120 G-s | | |
| P1V | .048 In/Sec | .093 G-s | |
| P1A | .037 In/Sec | .080 G-s | |
| P2H | .062 In/Sec | .740 G-s | |
| P2P | .629 G-s | | |
| P2V | .058 In/Sec | .190 G-s | |
| P2A | .063 In/Sec | .127 G-s | |

SAR57B - Oleum Twr Circ Pump E (20-Jul-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .062 In/Sec | .326 G-s | 1775.0 RPM |
| MOP | .169 G-s | | |
| MOV | .064 In/Sec | .140 G-s | |
| MOA | .065 In/Sec | .033 G-s | |
| MIH | .044 In/Sec | .494 G-s | |
| MIP | .244 G-s | | |
| MIV | .055 In/Sec | .116 G-s | |
| MIA | .058 In/Sec | .073 G-s | |

SAR61NM - Spent Acid Circ Pmp N (21-Jul-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MIH | .013 In/Sec | .545 G-s | 1775.0 RPM |
| MIP | .261 G-s | | |
| MIV | .022 In/Sec | .205 G-s | |
| MIA | .036 In/Sec | .116 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .018 In/Sec | .128 G-s | |
| PIP | .027 G-s | | |
| PIV | .032 In/Sec | .087 G-s | |
| PIA | .086 In/Sec | .127 G-s | |

SAR63EM - Spent Acid Feed Pmp E (21-Jul-21)

| | | | |
|---|---|---|---|
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .045 In/Sec | .276 G-s | 3575.0 RPM |

| | | | | |
|---|---|---|---|---|
| | MOP | .123 G-s | | |
| | MOV | .067 In/Sec | .148 G-s | |
| | MOA | .049 In/Sec | .061 G-s | |
| | MIH | .038 In/Sec | .428 G-s | |
| | MIP | .176 G-s | | |
| | MIV | .061 In/Sec | .113 G-s | |
| | MIA | .039 In/Sec | .082 G-s | |
| | | OVERALL LEVEL | 1K-20KHz | |
| | PIH | .089 In/Sec | 1.241 G-s | |
| | PIP | .043 G-s | | |
| | PIV | .067 In/Sec | .611 G-s | |
| | PIA | .090 In/Sec | .773 G-s | |
| | POH | .065 In/Sec | .964 G-s | |
| | POP | .072 G-s | | |
| | POV | .067 In/Sec | .637 G-s | |
| | POA | .068 In/Sec | .569 G-s | |
| SAR63WM | - Spent Acid Feed Pmp W | | (21-Jul-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .029 In/Sec | .244 G-s | 3575.0 RPM |
| | MOP | .0059 G-s | | |
| | MOV | .028 In/Sec | .056 G-s | |
| | MOA | .042 In/Sec | .115 G-s | |
| | MIH | .042 In/Sec | .683 G-s | |
| | MIP | .017 G-s | | |
| | MIV | .036 In/Sec | .198 G-s | |
| | MIA | .036 In/Sec | .132 G-s | |
| | | OVERALL LEVEL | 1K-20KHz | |
| | PIH | .063 In/Sec | .375 G-s | |
| | PIP | .111 G-s | | |
| | PIV | .059 In/Sec | .225 G-s | |
| | PIA | .051 In/Sec | .170 G-s | |
| SAR66A | - Vertical Cool Twr Pump #1 | | (02-Aug-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .042 In/Sec | .171 G-s | 1195.0 RPM |
| | MOP | .076 G-s | | |
| | MOV | .135 In/Sec | .212 G-s | |
| | MOA | .183 In/Sec | .207 G-s | |
| | MIH | .055 In/Sec | .719 G-s | |
| | MIP | .395 G-s | | |
| | MIV | .425 In/Sec | .371 G-s | |
| | MIA | .052 In/Sec | .303 G-s | |
| SAR66B | - Vertical Cool Twr Pump #2 | | (02-Aug-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |
| | MOH | .315 In/Sec | .155 G-s | 1195.0 RPM |
| | MOP | .067 G-s | | |
| | MOV | .457 In/Sec | .137 G-s | |
| | MOA | .227 In/Sec | .076 G-s | |
| | MIH | .181 In/Sec | .092 G-s | |
| | MIP | .049 G-s | | |
| | MIV | .211 In/Sec | .094 G-s | |
| | MIA | .195 In/Sec | .048 G-s | |
| SAR66C | - Vertical Cool Twr Pump #3 | | (02-Aug-21) | |
| | | OVERALL LEVEL | 1K-20kHz | |

| | | | | |
|---|---|---|---|---|
| MOH | .421 In/Sec | .106 G-s | 1195.0 RPM |
| MOP | .052 G-s | | |
| MOV | .262 In/Sec | .071 G-s | |
| MOA | .178 In/Sec | .039 G-s | |
| MIH | .183 In/Sec | .047 G-s | |
| MIP | .028 G-s | | |
| MIV | .090 In/Sec | .053 G-s | |
| MIA | .139 In/Sec | .026 G-s | |

SAR66D - Vertical Cool Twr Pump #4 (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .209 In/Sec | .109 G-s | 1195.0 RPM |
| MOP | .056 G-s | | |
| MOV | .189 In/Sec | .153 G-s | |
| MOA | .150 In/Sec | .044 G-s | |
| MIH | .095 In/Sec | .065 G-s | |
| MIP | .033 G-s | | |
| MIV | .078 In/Sec | .071 G-s | |
| MIA | .111 In/Sec | .037 G-s | |

SAR66E - Vertical Cool Twr Pump #5 (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .103 In/Sec | .289 G-s | 1195.0 RPM |
| MOP | .110 G-s | | |
| MOV | .246 In/Sec | 1.393 G-s | |
| MOA | .244 In/Sec | .419 G-s | |
| MIH | .050 In/Sec | .671 G-s | |
| MIP | .305 G-s | | |
| MIV | .125 In/Sec | .255 G-s | |
| MIA | .189 In/Sec | .253 G-s | |

SAR78A - Cooling Tower Fan #1 (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .196 In/Sec | .370 G-s | 1775.0 RPM |
| MOP | .165 G-s | | |
| MOV | .367 In/Sec | .320 G-s | |
| MOA | .386 In/Sec | .411 G-s | |
| MIH | .097 In/Sec | .540 G-s | |
| MIP | .364 G-s | | |
| MIV | .299 In/Sec | .247 G-s | |
| MIA | .412 In/Sec | .346 G-s | |

SAR78B - Cooling Tower Fan #2 (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .076 In/Sec | .754 G-s | 1775.0 RPM |
| MOP | .463 G-s | | |
| MOV | .061 In/Sec | .206 G-s | |
| MOA | .177 In/Sec | .115 G-s | |
| MIH | .093 In/Sec | 1.335 G-s | |
| MIP | .153 G-s | | |
| MIV | .107 In/Sec | .160 G-s | |
| MIA | .165 In/Sec | .203 G-s | |

SAR78C - Cooling Tower Fan #3 (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .091 In/Sec | .627 G-s | 1775.0 RPM |
| MOP | .387 G-s | | |

| | | | | |
|---|---|---|---|---|
| MOV | .103 In/Sec | .416 G-s | | |
| MOA | .218 In/Sec | .196 G-s | | |
| MIH | .099 In/Sec | 1.406 G-s | | |
| MIP | .264 G-s | | | |
| MIV | .153 In/Sec | .598 G-s | | |
| MIA | .169 In/Sec | .260 G-s | | |

SAR78D - Cooling Tower Fan #4 (02-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .110 In/Sec | .540 G-s | 1775.0 RPM |
| MOP | .359 G-s | | |
| MOV | .151 In/Sec | .254 G-s | |
| MOA | .289 In/Sec | .182 G-s | |
| MIH | .093 In/Sec | .548 G-s | |
| MIP | .381 G-s | | |
| MIV | .379 In/Sec | .309 G-s | |
| MIA | .288 In/Sec | .220 G-s | |

SAR128 - Oleum Fume Scrub Blwr (20-Jul-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MIH | .040 In/Sec | .438 G-s | 3575.0 RPM |
| MIP | .043 G-s | | |
| MIV | .055 In/Sec | .165 G-s | |
| MIA | .042 In/Sec | .064 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| FIH | .053 In/Sec | .392 G-s | |
| FIP | .032 G-s | | |
| FIV | .039 In/Sec | .400 G-s | |
| FIA | .050 In/Sec | .147 G-s | |
| FOH | .067 In/Sec | 1.035 G-s | |
| FOP | .196 G-s | | |
| FOV | .049 In/Sec | .464 G-s | |
| FOA | .093 In/Sec | .200 G-s | |

SAR135 - Spent Acid Circ Pmp E (21-Jul-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .030 In/Sec | .186 G-s | 1775.0 RPM |
| MOP | .036 G-s | | |
| MOV | .035 In/Sec | .056 G-s | |
| MOA | .070 In/Sec | .022 G-s | |
| MIH | .135 In/Sec | .150 G-s | |
| MIP | .073 G-s | | |
| MIV | .048 In/Sec | .059 G-s | |
| MIA | .145 In/Sec | .036 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .043 In/Sec | .136 G-s | |
| PIP | .118 G-s | | |
| PIV | .032 In/Sec | .064 G-s | |
| PIA | .037 In/Sec | .066 G-s | |

SAR137A - Contain Pit Pump N (20-Jul-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .057 In/Sec | .234 G-s | 1775.0 RPM |
| MOP | .119 G-s | | |
| MOV | .355 In/Sec | .117 G-s | |
| MOA | .267 In/Sec | .084 G-s | |

SAR157 - Spent Acid Feed Booster S (21-Jul-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MIH | .054 In/Sec | .194 G-s | 1020.0 RPM |
| MIP | .086 G-s | | |
| MIV | .062 In/Sec | .102 G-s | |
| MIA | .075 In/Sec | .048 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .073 In/Sec | .118 G-s | |
| PIP | .095 G-s | | |
| PIV | .036 In/Sec | .078 G-s | |
| PIA | .062 In/Sec | .102 G-s | |

SAR161A - N SAR Cool Twr Fan W (03-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .096 In/Sec | .621 G-s | 1775.0 RPM |
| MOP | .196 G-s | | |
| MOV | .264 In/Sec | .485 G-s | |
| MOA | .313 In/Sec | .139 G-s | |
| MIH | .157 In/Sec | 1.174 G-s | |
| MIP | .380 G-s | | |
| MIV | .185 In/Sec | .515 G-s | |
| MIA | .316 In/Sec | .259 G-s | |

SAR161B - N SAR Cool Twr Fan Middle (03-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .126 In/Sec | 1.000 G-s | 1775.0 RPM |
| MOP | .297 G-s | | |
| MOV | .160 In/Sec | .393 G-s | |
| MOA | .127 In/Sec | .171 G-s | |
| MIH | .130 In/Sec | .992 G-s | |
| MIP | .143 G-s | | |
| MIV | .152 In/Sec | .332 G-s | |
| MIA | .156 In/Sec | .226 G-s | |

SAR161C - N SAR Cool Twr Fan E (03-Aug-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .099 In/Sec | .348 G-s | 1775.0 RPM |
| MOP | .117 G-s | | |
| MOV | .130 In/Sec | .110 G-s | |
| MOA | .235 In/Sec | .061 G-s | |
| MIH | .223 In/Sec | .412 G-s | |
| MIP | .179 G-s | | |
| MIV | .219 In/Sec | .155 G-s | |
| MIA | .246 In/Sec | .150 G-s | |

SAR222 - Oleum Twr Drain Pmp (25-May-21)

| | OVERALL LEVEL | 1K-20kHz | |
|---|---|---|---|
| MOH | .060 In/Sec | .469 G-s | 3575.0 RPM |
| MOP | .0044 G-s | | |
| MOV | .087 In/Sec | .639 G-s | |
| MOA | .085 In/Sec | .414 G-s | |
| MIH | .053 In/Sec | .384 G-s | |
| MIP | .017 G-s | | |
| MIV | .096 In/Sec | .903 G-s | |
| MIA | .069 In/Sec | .357 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .238 In/Sec | 4.050 G-s | |

```
       PIP              .015 G-s
       PIV              .169 In/Sec      1.872 G-s
     * POH              .157 In/Sec      2.925 G-s
     * POP              .018 G-s
     * POV              .150 In/Sec      2.260 G-s

SAR231A    - Final Twr Circ Pump N         (20-Jul-21)
                      OVERALL LEVEL     1K-20kHz
       MOH              .157 In/Sec       .820 G-s        1775.0 RPM
       MOP              .366 G-s
       MOV              .155 In/Sec       .105 G-s
       MOA              .042 In/Sec       .271 G-s
       MIH              .109 In/Sec       .442 G-s
       MIP              .268 G-s
       MIV              .106 In/Sec       .152 G-s
       MIA              .040 In/Sec       .112 G-s

SAR233     - InterpassTwr Drain Pmp1       (08-Mar-21)
                      OVERALL LEVEL     1K-20KHz
     * POH              .034 In/Sec       .181 G-s        3575.0 RPM
     * POP              .015 G-s
     * POV              .030 In/Sec       .202 G-s

--------------------------------------------------------------------------------
  Clarification Of Vibration Units:
     Acc      -->  G-s      RMS
     Vel      -->  In/Sec   PK
     Dsp      -->  Mils     P-P

    * - Indicates Data Has Date/Time Different From Equipment Date/Time
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