| A DUTT   |          | TPM CIRCL   |                       |   |                                      | ACTIVITY                  | KK | QM   | PM      | JH   | SHE   | OT       | DM                      | E&T    | 1/417     |           |          |        |  |
|--|----------|-------------|-----------------------|---|--------------------------------------|---------------------------|----|------|---------|------|-------|----------|-------------------------|--------|-----------|-----------|----------|--------|--|
| <b>ADVIK</b>   | P14      | TPM CIRCL   |                       |   |                                      | LOSS NO. / STEP           |    |      |         |      |       |          |                         |        | i Kaiz    | EN IDE    | EA SI    |        |  |
|  |          | DEI 1       | DEPT :- Maintenance   |   |                                      | RESULT AREA P Q DEF : A C |    |      |         |      |       |          |                         | D 2 IN |           |           |          |        |  |
| CELL :- CELL NAME: Utility  KAIZEN THEME : To Prevent unsafe working |          |             |                       | MACHINE / STAGE :- RO plant  IDEA :- Visualize the water level. |                                      |                           |    |      |         |      |       |          | OPERATION :- Water tank |        |           |           |          |        |  |
|  |          |             |                       |   |                                      | NTERMEASURE:- P           |    |      | iter le | evel |       |          | BENCH                   |        | K         | 0 No.     |          |        |  |
| WIDELY/DEEPLY:-  |          |             |                       | indid   | cation out side wall                 | side                      |    |      |         |      |       | AIZE     |                         | RT     |           | 7.2015    |          |        |  |
| PROBLEM / PRI  | ESENT    | STATUS:- U  | nsafe                 |   |                                      |                           |    | -    |         |      |       |          | AIZEI                   |        |           |           | 7.2015   |        |  |
| working condit   | ion is t | there in RO | plant                 |   |                                      |                           |    |      |         |      |       |          |                         |        | IBERS :-  |           |          |        |  |
|  |          |             |                       |   |                                      |                           |    |      |         |      |       |          | VIr.Ga                  |        | _         |           |          |        |  |
|  |          |             |                       |   |                                      | COMPTENDED                |    |      |         |      |       |          | Mr.Ma                   |        |           |           |          |        |  |
|  |          |             |                       |   |                                      |                           |    |      |         |      |       |          | Prove                   |        | safe Coi  | ndition   |          |        |  |
|  |          |             |                       |   |                                      | -1.                       |    |      |         |      |       |          |                         |        |           |           | ina lur  | - o b  |  |
|  |          |             |                       |   |                                      |                           |    |      |         |      |       |          | 1 evei                  | ii wa  | tei siioi | tage dur  | iiig iui | ICH    |  |
|  |          |             |                       |   |                                      | CRATICAL                  |    |      |         |      |       |          |                         | KA     | IZEN SI   | JSTENA    | NCE      |        |  |
|  |          |             | BEF                   | ORE   |                                      |                           |    |      |         |      | AFTE  | <b>T</b> |                         |        |           | eversible | e Kaize  | en     |  |
| WHY - WHY AN   | ΔΙΥςΙς   | ·-          |                       |   | RESU                                 | IIT:-                     |    |      |         |      |       |          |                         |        | 0:        |           |          |        |  |
| Why1: un safe  |          |             | 1                     |   | I L                                  |                           |    |      |         |      |       |          | REQ                     | UENC   | ;Y :      |           |          |        |  |
| Why2: RO plan  |          |             |                       |   |                                      |                           |    |      |         |      |       |          |                         |        |           |           |          |        |  |
| maint. Person t  |          |             | g ~ j                 |   |                                      |                           |    |      |         |      |       |          |                         |        |           |           |          |        |  |
| Why3: RO plan  |          | •           | cation no             | t   |                                      |                           |    |      |         |      |       |          |                         |        |           |           |          |        |  |
| visible outside  |          |             |                       |   |                                      |                           |    |      |         |      |       |          |                         |        |           |           |          |        |  |
|  |          |             |                       |   |                                      |                           |    |      |         |      |       | С        | OST                     | NCU    | RRFD F    | OR MAK    | (ING k   | (A17FI |  |
|  |          |             |                       |   | \                                    |                           |    |      |         |      |       |          |                         |        |           | JR COST   |          |        |  |
| POOT CALISE  | · PO n   | lant water  | lovol                 |   |                                      |                           |    |      |         |      |       |          | IN                      |        |           | I RS      |          | RS     |  |
| ROOT CAUSE :- : RO plant water level indication not visible outside  |          |             |                       |   | Unsafe Condition No Unsafe Condition |                           |    |      |         |      |       |          | INR 2000/ INR 2000/-    |        |           |           |          |        |  |
|  |          |             | - 46.55               |   | UII                                  | saic condition            | 14 | o on | Jaic U  | Jiiu | ition |          |                         |        |           | RIZONTA   |          |        |  |
| REGISTRATION   |          |             | & 12.04. <sup>°</sup> | 15  |                                      |                           |    |      |         |      |       | , NC     |                         | ELL    | TARGET    | RESPONS   | SIBILITY | STATU  |  |
| REGISTERED BY :- Mr.Ganesh   |          |             |                       |   | Before After                         |                           |    |      |         |      |       | .        |                         |        |           |           |          |        |  |
| MANAGER'S SIGN :- Mr.Sivashankar G.                                  |          |             |                       | 20.0.0  |                                      |                           |    |      |         |      |       | _        |                         |        |           |           |          |        |  |

| ADVIK P14   | TPM CIRCLE NO TPM CIRCLE NAI                |                   |  | ACTIVITY<br>LOSS NO. / STEP                      | KK       | QM   | PM       | JH S  | HE  | ОТ                            | DM                                       | E&T                                    | KA17                 | FN II              | DEA SH                          | #FFT                        |
|---|---|-------------------|--|--|----------|------|----------|-------|-----|-------------------------------|--|--|----------------------|--------------------|---------------------------------|-----------------------------|
|   | DEPT :- Machin                              | e shop            |  | RESULT AREA                                      | P        | Q    | DEF :- A | A     | С   | D                             | S  | M                                      |                      |                    |                                 | ا کات                       |
| KAIZEN THEME : To Reconsumption for ope   |   | ght.              |  | NE / STAGE :- Stree Poka Yoke                    | et lignt |      |          |       |     |                               | RATIO                                    |  |                      |                    |                                 |                             |
|   |   |                   | COUN   | TERMEASURE:- F                                   | Provid   | ed A | uton     | natic |     |                               |  | IMAR                                   | K                    |                    | Units                           |                             |
| WIDELY/DEEPLY:-   |   |                   |  | On/Off control system of Street lights for       |          |      |          |       |     |                               | TARGET 828 Units KAIZEN START 21.07.2015 |  |                      |                    |                                 |                             |
| PROBLEM / PRESENT   | STATUS:- Pres                               | ently             | 11hou  | rs/days  |          |      |          |       |     |                               |  | I FINI                                 |                      |                    | 07.2015                         |                             |
| Street light are opera  |   | - 1               |  |  |          |      |          |       |     | N                             | /Ir.Dir<br>/Ir.Pav                       | nesh<br>wan                            | IBERS :-             |                    |                                 |                             |
|   |   |                   |  |  |          |      |          |       |     |                               |  | ITS :-                                 |                      |                    |                                 |                             |
| Street light Operating 12 Hours / All Working Day   |   |                   |  | Street Light Operating 11 Hours /All Working Day |          |      |          |       |     | 1. Monthly Saving of 75 Units |  |  |                      |                    |                                 |                             |
|   |   | The second second |  |  |          |      |          |       |     |                               |  |  |                      |                    |                                 |                             |
|   |   |                   |  |  |          |      |          |       |     |                               |  | KA                                     | IZEN SU              | JSTEN              | ANCE                            |                             |
|   |   | BEFORE            |  |  |          |      |          | AF    | TER |                               |  | TOI                                    |                      | eversil            | ble Kaize                       | en.                         |
| WHY - WHY ANALYSIS  |   | BEFORE            | RESULT                                       | T :-   |          |      |          | AF    | TER | Н                             | IOW                                      | TO I                                   | DO: Irr              | eversil            | ble Kaize                       | <br>en.                     |
| Why1: Street light Moconsumption is 903 UWhy2: Street light op 12hours/day                              | onthly Energy<br>Inits.                     |                   |  | Energy Co<br>Units                               |          | -    |          |       | TER | Н                             | IOW                                      | TO I                                   | 00: Irr              | eversil            | ble Kaize                       | en.                         |
| Why1: Street light Moconsumption is 903 UWhy2: Street light op  | onthly Energy<br>Inits.                     |                   | <b>RESULT</b> 950 -                          | Energy Co<br>Units                               |          | -    |          |       | TER | Н                             | IOW                                      | TO I                                   | 00: Irr              | eversil            | ble Kaize                       | en.                         |
| Why1: Street light Moconsumption is 903 UWhy2: Street light op 12hours/day                              | onthly Energy<br>Inits.                     |                   | 950 -  | Energy Co  |          | -    |          |       | TER | F                             | IOW<br>REQU                              | TO I<br>TO D<br>JENC                   | DO: Irre<br>O:<br>Y: | eversil            | ble Kaize                       |                             |
| Why1: Street light Moconsumption is 903 UWhy2: Street light op 12hours/day                              | onthly Energy<br>Inits.                     |                   | 950 <i>-</i>                                 | Energy Co<br>Units                               |          | -    |          |       | TER | F                             | IOW<br>REQU<br>OST I                     | TO I<br>TO D<br>JENC                   | DO: Irre             | eversil            | ble Kaize                       | AIZE<br>COST                |
| Why1: Street light Moconsumption is 903 UWhy2: Street light op 12hours/day Why3: Poka                   | onthly Energy<br>Inits.                     |                   | 950 -  | Energy Co<br>Units                               |          | -    |          |       | TER | F                             | OST I                                    | TO I<br>TO D<br>JENC<br>NCUI<br>IL COS | CO: Irre             | OR MA              | AKING K                         | AIZE<br>COST<br>RS          |
| Why1: Street light Moconsumption is 903 UWhy2: Street light op 12hours/day Why3: Poka                   | onthly Energy<br>Inits.                     |                   | 950 <i>-</i><br>900 <i>-</i><br>850 <i>-</i> | Energy Co<br>Units                               |          | -    |          |       | TER | CO<br>MA                      | OST I<br>TERIA<br>INR 7                  | NCUI<br>AL COS                         | RRED F               | OR M/JR COST       | AKING K                         | COST<br>RS<br>7500          |
| Why1: Street light Moconsumption is 903 UWhy2: Street light op 12hours/day Why3: Poka  ROOT CAUSE: Poka | onthly Energy<br>Inits.<br>Perating time no | ot fixed          | 950 <i>-</i>                                 | Energy Co<br>Units                               |          | -    |          |       | TER | CO<br>MA                      | OST I<br>TERIA<br>IN F<br>INR 7          | NCUI<br>L COS<br>RS<br>7500            | RRED F               | OR MA JR COST I RS | AKING K T TOTAL IN INR TAL DEPL | COST<br>RS<br>7500<br>DYMEI |
| Why1: Street light Moconsumption is 903 UWhy2: Street light op 12hours/day Why3: Poka                   | onthly Energy<br>Inits.<br>Perating time no | ot fixed          | 950 <i>-</i><br>900 <i>-</i><br>850 <i>-</i> | Energy Co<br>Units                               |          | -    |          | 8     | TER | CO<br>MA                      | OST I TERIA IN F                         | NCUI<br>L COS<br>RS<br>7500            | RRED F               | OR MA JR COST I RS | AKING K                         | COST<br>RS<br>7500<br>DYMEI |

| K7   |                        |                       |       |        |          |                   |       |          |               |           |           |                 |                |  |  |  |  |
|--|------------------------|-----------------------|-------|--------|----------|-------------------|-------|----------|---------------|-----------|-----------|-----------------|----------------|--|--|--|--|
| TPM CIRCLE NO :- 3                                     |                        | ACTIVITY              | KK    | QM     | PM       | JH                | SHE   | ОТ       | DM            | E&T       | 1/1/17    | 'N INF          |                |  |  |  |  |
| P14 TPM CIRCLE NAME : Orion                            |                        | LOSS NO. / STEP       |       |        |          |                   |       |          |               |           | KAIZE     | N IUE           | EA SHEET       |  |  |  |  |
| DEPT :- Machine shop                                   |                        | RESULT AREA           | P     | Q      | DEF :- F | 1                 | С     | D        | S             | М         |           |                 |                |  |  |  |  |
| CELL :- A351 CELL NAME:- A351 soft line                | MACH                   | IINE / STAGE :- Cub-1 |       |        |          |                   |       | OPE      | RATIO         | <u> </u>  |           |                 |                |  |  |  |  |
| KAIZEN THEME: To Reduce energy consumption.            | IDEA                   | : Poka Yoke           |       |        |          |                   |       |          |               |           |           |                 |                |  |  |  |  |
|  | cour                   | NTERMEASURE:- P       | rovic | ed C   | n/Of     | f con             | trol  |          | ENCH          |           | K         | 76 Un           |                |  |  |  |  |
| WIDELY/DEEPLY:-  | svste                  | m of Coolant pum      | о Мо  | tor cu | ıt off   | the               |       |          | ARGE<br>AIZEN |           | DT        | 66 Un<br>18.07. |                |  |  |  |  |
| ·  | _                      | or when no cutting    |       |        |          |                   | re    |          | AIZEN         |           |           | 18.07.          |                |  |  |  |  |
| PROBLEM / PRESENT STATUS :- Presently                  | 1                      | achine.               | оро.  |        |          |                   |       | <u></u>  | AILLI         | ı ı ııvı. | 311       | 10.07.          | 2013           |  |  |  |  |
| Monthly Average Energy Consumption of                  | 0                      | 401111101             |       |        |          |                   |       | T        | EAM           | MEM       | BERS :-   |                 |                |  |  |  |  |
| A351 machine Line Coolant pump motor is                |                        |                       |       |        |          |                   |       |          | /lr.Dir       |           |           |                 |                |  |  |  |  |
| 76 Units.  |                        |                       |       |        |          |                   |       |          |               |           |           |                 |                |  |  |  |  |
|  |                        |                       |       |        |          |                   |       | В        | ENEF          | <u> </u>  |           |                 |                |  |  |  |  |
| Motor running average                                  |                        | Motor runi            | ninç  | j av   | era      | ge                |       | 1        | . Moi         | nthly     | Saving o  | f 10 Un         | its            |  |  |  |  |
| 16 Hours / Working Day                                 | 14 Hours / Working Day |                       |       |        |          |                   |       |          |               |           |           |                 |                |  |  |  |  |
| To Hours / Horking Day                                 |                        | 11110dis7             |       |        | .g =     | <b>u</b> <i>y</i> |       |          |               |           |           |                 |                |  |  |  |  |
|  |                        |                       |       |        |          |                   |       |          |               | KA        | IZEN SU   | STENA           | NCE            |  |  |  |  |
| [ <del></del>  | -                      |                       |       |        |          |                   |       |          | VI AT         | TOI       | nn Irro   | vorsible        | e Kaizen.      |  |  |  |  |
| BEFORE   |                        |                       |       |        |          |                   | AFTEF | <b>\</b> |               |           | 0:        |                 | raizeii.       |  |  |  |  |
| WHY - WHY ANALYSIS :-                                  | RESUI                  | LT :-                 |       |        |          |                   |       |          |               |           | Y :       |                 |                |  |  |  |  |
| Why1: A315 Assy. Line Monthly Energy                   |                        |                       |       |        |          |                   |       |          | REQU          | JEINC     | Υ :       |                 |                |  |  |  |  |
| consumption is 76 Units.                               |                        | Energy Co             | ncu   | mni    | ion      |                   |       |          |               |           |           |                 |                |  |  |  |  |
| Why2: Coolant Motor running when no                    |                        | -                     |       | •      | .1011    |                   |       |          |               |           |           |                 |                |  |  |  |  |
| · ·  |                        | Units/                | 'Mo   | nth    |          |                   |       |          |               |           |           |                 |                |  |  |  |  |
| cutting operation work is there.                       | 00                     |                       |       |        |          |                   |       |          |               |           |           |                 |                |  |  |  |  |
| Why3: Poka   | 80 -                   | 76                    |       |        |          |                   |       |          |               |           |           |                 |                |  |  |  |  |
|  | 75 -                   |                       |       |        |          |                   |       | C        | OSTI          | NCUI      | RRED FO   | R MAK           | ING KAIZEN     |  |  |  |  |
| DOOT CAUSE . Dake                                      | /3 -                   |                       |       |        |          |                   |       |          |               |           | T LABOUR  |                 | TOTAL COST     |  |  |  |  |
| ROOT CAUSE: Poka                                       | 70 -                   |                       |       |        |          |                   |       |          | IN R          |           | IN        |                 | IN RS          |  |  |  |  |
|  | '0 -                   |                       |       |        | 66       | )                 |       |          | INR           | 500       |           |                 | INR 500        |  |  |  |  |
|  | 65 -                   |                       |       |        |          |                   |       | SC       | ODE 0         | DI AN     | L EOD HOD | IZONITAI        | L DEPLOYMENT   |  |  |  |  |
| <b>REGISTRATION NO. &amp; DATE: 764 &amp; 12.05.15</b> |                        |                       |       |        |          |                   |       | SR       | · CE          |           |           |                 | IBILITY STATUS |  |  |  |  |
| REGISTERED BY :- Mr.Dinesha.M                          | 60 -                   |                       | ı     |        |          |                   |       | NC       | '-            | -+        |           |                 |                |  |  |  |  |
| MANAGER'S SIGN :- Mr. Sivasankar                       |                        | Before                |       |        | Afte     | er                |       |          |               |           |           |                 |                |  |  |  |  |