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| 0 | 08/04/2009 | L. Lavazza | S. Spreafico | S. Spreafico | Released for Construction | RFC |
| Rev. | Date | Created by | Checked by | Approved by | Description | Status |
| Project (Проект) | | | | | | |
| <h2 style="text-align: center;">Maritza East I Power Station</h2> | | | | | | |
| Company (Възложителя): | | | | | | |
|  | | | | | | |
| Space for stamp of Municipality of Galabovo Място за печат на Община Гълъбово | | | | Space for further stamps Място за допълнителни печати | | |
| Area for Stamp of EQE Control OOD (ICS) Място за печат на EQE Control OOD (Незав. надзор) | | | | Space for stamp of authorized Bulgarian Designer Място за печат на лицензиран български проектант | | |
| Main Contractor Главен изпълнител  Power Generation AG Power Boiler GmbH | | | | Partner of Main Contractor Партньор на главния изпълнител  Power Italia SpA | | |
| Resp. dept. Отговорен отдел ECS - Piping & Layout Dept. | Created by Изготвил L. Lavazza | Checked by Проверил S. Spreafico | Approved by Одобрил S. Carli | Format Формат A4 | | |
| Scale Мащаб N.A. |  | | Class n° (e.g. KKS) Класифик. № HT | For Company Review & Approval : За одобрение от Възложителя: NO | | |
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| Logo of Legal Owner Официален собственик  Power Italia SpA | Sub Contractors Doc. Number № на документа на подизпълнителя | | Consortium Partner Document Code Код на документа на партньора | | | |
| | Title, Subtitle Заглавие, подзаглавие FGD Plant | | Proj. Doc. Number № на проектния документ MTZ_12_B_HT-----_PM_003 | | | |
| | INSULATION Material Take Off Areas B and C | | Rev. Рев 0 | Date Дата 08/04/2009 | Lang. Език EN | Sheet Страница 1 of 3 |

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Heat tracing and insulation line list

| Process water | | | | | | | | | | | |
|---|----|------------------|--|-----|------------------|----------------|----------------------------|------------------------|------------------------|---------------|-------------------------------|
| From | to | line item TAG | P&I D | DN | fluid temp °C | temp min °C | Material & piping class | tracing length m | max temp tube °C | TH insulation | insulation evaluation (sm) |
| Unità 01 | | | | | | | | | | | |
| from absorber/dewatering to mist eliminator | | 01HTQ20BR001 | MTZ/12/B/HTQ-----/FD/001 MTZ/01/B/HTF----V22/FD/001 | 150 | 8 - 35,5 | 5 | FRP-AV2 | 60 | 60 | 50 | 56,5 |
| from 01HTQ27 BR010 a LT to 01HTQ27 BR030 a LT | | 01HTQ27BR030 | MTZ/01/B/HTF----V27/FD/001 | 25 | 8 - 35,5 | 5 | FRP-AV2 | 3 | 60 | 50 | 2,8 |
| | | 01HTQ27BR040 | MTZ/01/B/HTF----V27/FD/001 | 25 | 8 - 35,5 | 5 | FRP-AV2 | 3 | 60 | 50 | 2,8 |
| | | 01HTQ27BR018 | MTZ/01/B/HTF----V27/FD/001 | 80 | 8 - 35,5 | 5 | FRP-AV2 | 10 | 60 | 50 | 9,4 |
| | | 01HTQ26BR010 | MTZ/01/B/HTF----V27/FD/001 | 150 | 8 - 35,5 | 5 | FRP-AV2 | 10 | 60 | 50 | 9,4 |
| Unità 02 | | | | | | | | | | | |
| from absorber/dewatering to mist eliminator | | 02HTQ20BR001 | MTZ/12/B/HTQ-----/FD/001 MTZ/02/B/HTF----V22/FD/001 | 150 | 8 - 35,5 | 5 | FRP-AV2 | 60 | 60 | 50 | 56,5 |
| from 02HTQ27 BR010 a LT to 02HTQ27 BR030 a LT | | 02HTQ27BR030 | MTZ/02/B/HTF----V27/FD/001 | 25 | 8 - 35,5 | 5 | FRP-AV2 | 10 | 60 | 50 | 9,4 |
| | | 02HTQ27BR040 | MTZ/02/B/HTF----V27/FD/001 | 25 | 8 - 35,5 | 5 | FRP-AV2 | 10 | 60 | 50 | 9,4 |
| | | 02HTQ27BR018 | MTZ/02/B/HTF----V27/FD/001 | 80 | 8 - 35,5 | 5 | FRP-AV2 | 10 | 60 | 50 | 9,4 |
| | | 02HTQ26BR010 | MTZ/02/B/HTF----V27/FD/001 | 150 | 8 - 35,5 | 5 | FRP-AV2 | 10 | 60 | 50 | 9,4 |
| Linee comuni alle due unità common lines for two units | | | | | | | | | | | |
| from absorber/dewatering to limestone preparation building | | 09HTQ10BR012 | MTZ/12/B/HTQ-----/FD/001 | 200 | 8-35,5 | 5 | FRP-AV2 | 80 | 60 | 50 | 75,4 |

| Filtrate | | | | | | | | | | | |
|--|--|--------------|----------------------------|-----|---------|---|---------|----|----|----|------|
| Linee comuni alle due unità common lines for two units | | | | | | | | | | | |
| from absorber/dewatering building to limestone preparation building | | 09HTL41BR001 | MTZ/12/B/HTL-----/FD/002 | 250 | 30 - 50 | 5 | FRP-AV2 | 70 | 60 | 50 | 66,0 |
| Unità 01 | | | | | | | | | | | |
| from absorber/dewatering building to absorber unit 1 | | 01HTL28BR010 | MTZ/01/B/HTF----V27/FD/001 | 200 | 30 - 50 | 5 | FRP-AV2 | 40 | 60 | 50 | 37,7 |
| Unità 02 | | | | | | | | | | | |

| | | | | | | | | | | |
|---|--------------|----------------------------|-----|---------|---|---------|----|----|----|------|
| from absorber/dewatering building to absorber unit 2 | 02HTL28BR010 | MTZ/02/B/HTF----V27/FD/001 | 200 | 30 - 50 | 5 | FRP-AV2 | 40 | 60 | 50 | 37,7 |
|---|--------------|----------------------------|-----|---------|---|---------|----|----|----|------|

| Cooling water | | | | | | | | | | |
|--|-----------------|--------------------------|-----|------------|-------------------|----------------------------|------------------------|------------------------|----|------|
| | line item [TAG] | P&I D | DN | temp °C | temp min °C | material & piping class | tracing length m | max temp tube °C | | |
| Linee comuni alle due unità common lines for two units | | | | | | | | | | |
| from absorber/dewatering building to limestone preparation building | 09PGA50BR001 | MTZ/12/B/PGA-----/FD/001 | 100 | 13 - 40,5 | 5 | carbon steel AA1 | 70 | 100 | 50 | 66,0 |
| from limestone preparation building to absorber/dewatering building | 09PGB50BR001 | MTZ/12/B/PGA-----/FD/001 | 100 | 20,5 - 48 | 5 | carbon steel AA1 | 70 | 100 | 50 | 66,0 |

| | | | | | | | | | | |
|-----|--|--|--|--|--|--|--|--|--|-------|
| tot | | | | | | | | | | 524,0 |
|-----|--|--|--|--|--|--|--|--|--|-------|