

Employer  
**SAKO Brno a.s.**

Project  
**„Modernization of WtE Plant SAKO Brno“**

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# **PART II.c**

## **CONTRACTUAL PENALTIES FOR NON-COMPLIANCE WITH VALUES**



## PART II.c CONTRACTUAL PENALTIES FOR NON-COMPLIANCE WITH VALUES

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# 1. CONTRACTUAL PENALTIES FOR NON-COMPLIANCE WITH VALUES

## 1. SHORTENED LIFETIME

- 1.1. If the Line fails to reach the lifetime specified in Table No. 1, of part II.g Guarantees, the Contractor is obliged to pay the Employer the amount of Guarantee Compensation calculated in accordance with Article 1.1.18 of the Contract.
- 1.2. If the amount of the Guarantee Compensation calculated in accordance with Article 1.1.18 of the Contract exceeds the amount of CZK 100,000,000 excluding VAT, it is considered as a material breach of the Contract.

## 2. INCREASED OPEX

- 2.1. As part of the Performance Tests according to appendix A11 End of Assembly, Commissioning, and Testing and appendix A20 Procedure for Guarantee Tests, the consumption of energy and all other media at the operation site is measured. The results of this measurement are compared with parameters listed in Table No. 5 and No.6 of part II.g Guarantees. Each parameter is assessed and evaluated separately.
- 2.2. In case of non-compliance with the parameter values specified in Table No. 5 and No. 6 of part II.g Guarantees, the Contractor shall pay the Guarantee Compensation to the Employer calculated in accordance with Article 1.1.18 of the Contract.
- 2.3. If the amount of the Guarantee Compensation calculated in accordance with Article 1.1.18 of the Contract exceeds the amount of CZK 100,000,000, it is considered as a material breach of the Contract.

## 3. REDUCED NET POWER PRODUCTION

- 3.1. As part of the Performance Tests according to appendix A11 End of Assembly, Commissioning, and Testing and appendix A20 Procedure for Guarantee Tests, the production of electricity is measured at the generator outlets while measuring the consumption of all auxiliary operations in order to determine net electricity production according to this appendix. The results of this measurement are compared with parameters listed in Table No. 5 of part II.g Guarantees.
- 3.2. In case of non-compliance with the parameter values specified in Table No. 5 of part II.g Guarantees, the Contractor shall pay the Guarantee Compensation to the Employer calculated in accordance with Article 1.1.18 of the Contract.
- 3.3. If the amount of the Guarantee Compensation calculated in accordance with Article 1.1.18 of the Contract exceeds the amount of CZK 100,000,000, it is considered as a material breach of the Contract.

#### **4. REDUCED LINE AVAILABILITY**

- 4.1. The availability is based on the period of operating the Line during each year within the Warranty Period.
- 4.2. The availability is proved by the automatic records of the Line operation (i.e. measurement of operating hours of the primary fan, ID-fan, etc.).
- 4.3. Availability is considered to be met under the following conditions:
  - 4.3.1. The Line is considered available only if all guaranteed requirements in the field of the environment are met according to Table No. 3 and 4 of part II.g Guarantees.
  - 4.3.2. The Line is available if operation is possible at all operating points of the Capacity Diagram.
  - 4.3.3. Operation start-up and shut-down are calculated as operating hours:
    - i. Beginning of start-up= waste fed to the grate,
    - ii. End of shutdown = shutdown of burners.
  - 4.3.4. For the purposes of calculating the Line availability, the period of planned outages is considered to be the time period during which the Line is not available and it is also not included in the period in which the Line availability is measured.
  - 4.3.5. The availability guarantee is based on the total planned outages in a maximum duration of 380 hours a year. All common systems shall be in operation 8,760 hours a year. Common systems are those where there is a redundant equipment, as long as at least one part of the equipment is available and meets the requirements of the system e.g. waste cranes. The periods of planned outages are exclusively at the Employer's discretion. If the planned outage lasts longer and is not attributable to the Contractor, the time over 380 hours a year is calculated as the Line operation time.
  - 4.3.6. Operation interruptions that do not in any manner originate from a breach of the Contractor's obligations under the Contract or Defects of the Contract Object, are calculated as the Line operation time.
  - 4.3.7. If the facility is not in operation for reasons not attributable to the Contractor, the Contractor is entitled to perform maintenance and similar work at the specified time, if the Employer has given its prior consent. Such a consent may not be granted if the work to be performed by the Contractor would form an obstacle to the Employer's work.
- 4.4. If the availability parameter according to Article 4 of this Appendix cannot be met during the Warranty Period, i.e. in each of the two year, the Employer is entitled to

decide to extend the Warranty Period in accordance with Article 16.10 of the Contract for a maximum period of two consecutive years from the date of the expected completion of the Warranty Period.

- 4.5. If the actually achieved availability fails to reach the guaranteed value of parameters listed in Table No. 2 of part II.g Guarantees, the Contractor shall pay the Employer an amount of 0.2% of the Contract Amount excl. VAT for the reduced Line availability by one tenth of a percent compared to the parameter values listed in Table 2 of part II.g Guarantees.
- 4.6. Proven availability of the Line, which reaches only 95% and less of the guaranteed parameter values in Table No. 2 of part II.g Guarantees is considered as a material breach of the Contract.

## **5. AVAILABILITY OF THE LINE CONTROL AND MONITORING SYSTEM**

- 5.1. The annual availability of the control and monitoring system shall reach a minimum of 8,755 hours during the Warranty Period as per Table No.2 Part II.g Guarantees.
- 5.2. The annual availability is calculated as follows:  
$$100\% - (\text{total number of malfunction hours a year} * 100 / 8,760 \text{ hours})$$
- 5.3. The total annual number of malfunction hours is calculated as the sum of all recorded malfunction hours of the control and monitoring system in relation to malfunctions and/or faults of the control and monitoring system.
- 5.4. The malfunction hours in connection with malfunctions and/or faults of the control and monitoring system shall be calculated as the interval between the time of the malfunction and/or fault and the time when the Contractor corrected this malfunction and/or fault.
- 5.5. The control and monitoring system is considered to be available if the basic functions necessary for the proper functioning of the processing equipment work in a satisfactory manner. This means, as a minimum, the following:
  - 5.5.1. visualization, reporting and commands is trouble-free on all workstations with two monitors, a keyboard and a mouse;
  - 5.5.2. data communication between the equipment in the control room and all process stations is trouble-free;
  - 5.5.3. the performance meets the required reaction times;
  - 5.5.4. data acquisition and storage in workstations and in the reporting/database server is trouble-free;
  - 5.5.5. data acquisition and storage in the system for environmental reporting system is trouble-free;

- 5.5.6. data acquisition and storage for energy balance records and volume balance is trouble-free,
- 5.5.7. The basic functions of the process stations are trouble-free, including their signalling interfaces to process components and other equipment, analogue and binary automatic control functions, communication with equipment in the control room and communication with local operating panels.
- 5.6. If it is not possible to comply with the availability requirements according to Article 5.1 of this appendix, the Contractor shall pay the Employer a contractual penalty of 0.01% of the Contract Amount excl. VAT for each hour by which the achieved annual availability is lower than 8,755 hours.
- 5.7. The annual operational availability of the control and monitoring system of less than 8,500 hours is considered as a material breach of the Contract.

## **6. CONTINUOUS LINE OPERATION PERIOD (i.e. period between manual cleaning)**

- 6.1. The period of continuous operation, including the time of its start and end, is specified under appendix A20 Procedure for Guarantee Tests.
- 6.2. The operation period in relation to the continuous operation period according to the appendix mentioned in the previous paragraph is the period over which the heat exchange surfaces of the Line boiler are in contact with flue gases from the operation of burners or from waste incineration.
- 6.3. Cleaning measures such as the boiler rapping and measures that can be taken without entering the Line boiler can be performed and are not considered as the end of the period between manual Line boiler cleaning.
- 6.4. It is explicitly emphasized that the use of explosives in heat transfer pass and similar measures are prohibited. The use of such exceptional measures is reserved for the Employer to be able to achieve continuous operation of 16,000 hours, if the Employer considers this mode of operation suitable after the end of the Warranty Period.
- 6.5. If the continuous line operation period between manual boiler cleaning cannot be achieved and parameters listed under Table No. 2 of part II.g Guarantees cannot be met during the Warranty Period, i.e. for a period of two consecutive years, the Employer is entitled to decide to extend the Warranty Period in relation to the parameter under this Article in accordance with Article 16 of the Contract for a maximum period of two consecutive years from the date of the expected completion of the Warranty Period.
- 6.6. If the continuous line operation period between manual boiler cleaning cannot be achieved and parameters listed under Table No. 2 of part No. II.g Guarantees cannot be met, the Contractor undertakes to pay the Employer a contractual penalty of CZK 30,000,000 for reduced continuous operation compared to the period listed in Table 2 of part II.g Guarantees.

- 6.7. Proven continuous operation of less than 7,500 hours is considered as a material breach of the Contract.

## **7. REDUCED LINE CAPACITY**

### Reduced mechanical grate load with waste

- 7.1. The Contractor undertakes to pay the Employer a penalty of 0.2% of the Contract Amount excl. VAT for each one tenth of one percent by which the mechanical grate load with waste in the guaranteed capacity fails to meet part 0.g Forms for Technical Data, which forms integral part of the Contractor's Tender.

- 7.2. A measured deviation exceeding 5% is considered as a material breach of the Contract.

### Reduced turbine absorption capacity

- 7.3. The Contractor undertakes to pay the Employer a contractual penalty of 0.2% of the Contract Amount excl. VAT for each one tenth of one percent by which the turbine absorption capacity guaranteed parameter fails to meet part 0.g Forms for Technical Data, which forms integral part of the Contractor's Tender.

- 7.4. A measured deviation exceeding 5% is considered as a material breach of the Contract.

## **8. FAILURE TO COMPLY WITH EMISSION VALUES**

- 8.1. The Contractor undertakes to pay the Employer a contractual penalty of CZK 1,000,000 for each 1 mg/Nm<sup>3</sup> of measured NO<sub>x</sub> emissions, by which this value will be higher than the guaranteed value given in Table No. 3, of part II.g Guarantees.

- 8.2. Exceeding the maximum permissible value of NO<sub>x</sub> emissions specified in Table No. 3, of part II.g Guarantees is considered as a material breach of the Contract.

## **9. FAILURE TO COMPLY WITH ENVIRONMENTAL REQUIREMENTS**

- 9.1. If the requirements specified in Tables No. 3 and No. 4, of part II.g Guarantees are not met, this is considered as a material breach of the Contract.

- 9.2. If the Employer incurs any costs as a result of non-compliance with the requirements specified in Tables No. 3 and No. 4, of part II.g Guarantees by the Contractor or to suffer any damage as a result of non-compliance with such requirements by the Contractor, the Contractor undertakes to compensate the Employer in full for such costs or damage.