

Elements of the Environmental Protection Activity of the Dunaferr Company Group

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Abstract

The article presents the general environmental protection tasks and result of a metallurgical large-scale business, the Dunaferr Company Group.

1 The changed role of the environmental protection in the society

Nowadays we are the participants of those process, in which the environmental protection will become a matter of general concernment. This fact requires a new approach from the the companies, from the employees as well as from the authorities. The environmental protection is not already a secret activity of a narrow sphere, but it is a public progress controlled by the common weal, performing in the animus of openness and embraceable by everybody. The role of the above mentioned actors of the environmental protection has also changed. The role of the authorities and companies, keeping the traditional controlling functions, but also over them, will be grown over more and more into a function broadening with safeguards for one's interests, with partnership, and with data service.

The role of the inhabitants is also under changing. Nevertheless, this is not originated from the division of the tasks, regulated by the frames of law, but it can be driven back for the social self-consciousness of the inhabitants.

The companies have to note, that it is a "natural" right of the employees and the inhabitants, at the same time also fixing in the laws, to acknowledge the probably contaminating and unhealthy effects of the companies near to their domicile, and to estimate the risks originated from these effect.

Over the traditional environmental protection functions, nowadays the examination of the regional effects of the company's activity, and their interaction with the labour health is coming into prominence. We can say, that the addition of our new technological development with environmental protection aspects as a basic aspect.

It is important to mention this, as there is not a society, which can overstep its own barriers. In our age it seems to be natural (but it is not sure to be true), that the investments regarding only to the environmental protection can not return technically, as in this case we can not count with the usual material and energy saving or with the improvement of quality. Nevertheless we can extend the incoming side of the investments for the nature and environmental protection: in a wider round, the preservation of the people from toxicants, heat, noise, harmful radiation, the saving of the state of the built environment, the conservation of the variety of the living world also have to be counted as a profit. It is already an accepted apprehension today, that the costs of the human, built environmental and natural rehabilitation, becoming necessary through the contamination of the environment are higher, or at the very least are in parity with the costs to be spent for the elimination of the contamination of the environment. So examining the question of the return in wider round, it has to be considered as returnable.

The changed situation and the quickly changing demands are realised also by the management of the Dunaferri Company Group. At our company the environmental protection has an accentuated importance in more aspects. At our company group a high quantity of air pollutants and water contaminants, as well as hazardous wastes are originated. The reduction of the quantity of these, their disposal, the recycling of the originated wastes into the production, the survey of the health protection effects of the emitted materials, and the archiving of their data are forming the classical tasks of the environmental protection of the company.

2 The elements of the environmental strategy of the Dunaferri Rt.

2.1 Liaisons with the authorities

The authorial, firstly inspectorate liaisons of our company have been established by a regulation, by which all the economic organisations are obliged to measure regularly the quantities of the waste waters, and the companies have to send their given composition and the emission values counted from them to the competent inspectorate. This is also valid for the air pollutants and water contaminants, as well as for the hazardous wastes, with the applicable modifications.

With this in view our predecessor has already established, within the frame of the material testing department, those laboratory interesting in environmental protection measurements, later those division, which is measuring the composition of waste waters, air pollutants and hazardous wastes.

It is well known, that while the waste waters of the Company Group are contaminated under the limit values, but yet, due to their significant quantity, they carry a large quantity of water contaminants to the Danube. From the 90's we register updating on computer the emissions of our contaminants.

The Shareholding Company spends yearly 12 million HUF for the analysis of the outgoing waste waters of the Company Group in the frame of a so called self-control contract, moreover it spends 20 million HUF for the further survey of the inner canal system.

In a given case the Shareholding company pays waste water amercement for the concentration exceeding of the waste waters of the Company Group. The amount of this is 300-400 thousand HUF, which means the 5-10% of the total amercement.

The concentration of the contaminants in the most contaminated canal of the Company Group reaches the four-fifth of the limit value, which shows improving tendencies on.

The results reached on the scope of the reduction of our air pollution are supremely characterised by the fight against the dust content. The quantity of the dust emitted by the Company Group has decreased from the 20 thousand tonnes measured in the 70's into 10 thousand tonnes by the beginning of the 90's, which has fallen under 2000 tonnes by the year of 1998 with the elimination of the different dust sources and with the improving of the efficiency of the dust separation. So the dust emission of our companies has decreased significantly, improving with this the air quality of our town. Due to the improvement our town could stride over the sedimentation value characterised by 16 g/m²month, with which it could emerge from the group of the most contaminated towns, christened to "dirty 12" in 1998, and has got among the towns with moderately contaminated category.

In despite of the reached results, we are continuing on the fight against the dust emission. In the frame of this the solution of the 1st phase of the dust separation of the blast furnace casting hall was performed, during which we have solved the exhaustion from the working area, the separation and the recycling of the dust originating during the tapping. We will continue the works connecting to the protection of atmospheric purity, depending on the financial possibilities. Among our plans for the near future the most accentuated item is the solution of the dust exhausting of the converter (BOF) hall.

In the frame of our tasks concerning to the hazardous wastes all of our companies has elaborated their waste management plan. Our companies are performing the waste management independently. The priorities applied in this area (recycling, sale, transporting to a deposit) meet the international practice.

2.2 Estimate of the draft of laws

At the DUNAFERR Group, due to its position in the industry and in the whole national economy, a lot of environmental protection experience has cumulated, which would be a precedent for the other large companies, too. Considering our position in the industrial branch, we are the only metallurgical company, who could pull through the recession from the 90's only with short term 1-1 year breaks and not with significant losses. Our production structure is built on a classical iron metallurgical verticum, which is also unique in the country. In this role the DUNAFERR Group, together with the other large companies, forms an important element of that system, in the frame of which, it provides data for the effect surveys of the different ministries. The survey for the introduction of the environment load fee was an example for this in the near past.

Our role on the field of the laws preparation is not only a passive role, but through the Hungarian Iron and Steel Association, is an active role in a certain rate, as we have got the chance in more cases to estimate, to comment the laws and regulations under preparation. The advantage of this is dual: in one hand our comments and interests can appear directly on the table of the law-makers, helping them, that the experts experienced in legal problems could acquaint themselves with the single concrete fragments of the industrial reality, with which we can probably protect our companies against certain legal over-controlling; in the

other hand the cognition of the laws before their coming to effort gives 2-3 years advantage for us to effectuate them. Typical examples of the preparation for the new laws are the internal technical economical surveys, studies and effect studies establishing an investment.

These similar tasks means a small expenditure, but due to their effect, managing them with the necessary elasticity, we can save more million HUF expenditures for the Company Group.

2.3 Investment policy

The philosophy of the environmental protection style investments of our Company Group is originated from the essence of the protection of the human and natural environment. Considering its function, these are mostly started from inside, and in a smaller part magisterial commitments. Considering their subject, they are regarding equally to the air, to the ground and ground water, waste water and to the wastes. Moreover our health protection like investments naturally were present before the forming of the new from of the company, but in the last years our practice has broadened with a lot of new elements. The examination of the performance of our existing equipment has to be counted as novelty and, if it is necessary the renewing of them and the settlement of new cleaning equipment. In the last years, inside the investments, the rate of the objects connecting to the measurements and analyses, as well as to the settlement of monitoring systems has also appeared.

The companies of the Dunafer Group manage their environmental protection style tasks, among them, their investment and development mostly independently. In this role they have eliminated a lot of, generally smaller contaminating sources from their own financial sources.

Nevertheless, with the forming of the Shareholding Company, the organisation of the Technical Development Directorate manages those kind of the environmental protection-like investments, the company level interest of which needs an extra or significant value investment cost. During the execution of a lot of investments with an accentuated or high value cost, the Shareholding Company manages its decisions independently. In this nature the role of the Shareholding company is already more complicated.. It performs

- the designation of the task, which is performed with the co-operation of the authorities,
- it cares on the establishment of the financial sources, in which activity it uses the different application sources, as PHARE, KAC and OMFB, as far as possible,
- manages the application of the task and the denomination of the executing company,
- takes part in the controlling of the execution, as well as in the taking over and commissioning procedure of the equipment co-operating with the given companies.

2.4 Introduction of the environmental controlling system

The cognition of the environmental factors and the processing of the measured data is basically important for the evaluation of the state of the environment. For the solution of the troubles and tasks originating from this, a decision was made at the DUNAFERR Company Group for the introduction of the Environmental Protection Controlling System. The

essence of the system is, that with the deep knowledge of the effects on the environment a document system has to be established and operated, which can ensure in one hand the environmental orientation of the production processes, in the other hand the stepwise and purposive reduction of the environmental harms. It will be also regulated, for which the present and the planned regulation in the near future will be expanded, and what would be the frequency of the these controlling measurements. In this aspect the auditation was started already in the three companies of the company group.

The successful operation of the system makes possible to follow the further changes, and the responsible management, owning the continuous information, would state a determined goal and requirement system on the scope of the environmental protection.

The environmental information system simultaneously has to serve the evaluation of the environmental contamination, the information for the authorities and the information to the given interim organisations. Such a system make it possible, that the data characterising the emissions of the production work or the single mills, would be available unitedly and regularly.

The state of our *environmental controlling system* gives a typical view on the environmental state of our Company Group, in the spirit of which our companies, at the beginning of the 90' has formed their own systems. The main steps of the development of the environmental controlling activity were as follows:

- *Organisation forming*, in the frame of which the managing organisation were formed mostly with high graduated or specialised management for the environmental protection.
- *Forming of the information systems*, in the frame of which computerised archiving systems were formed for the storing and processing of data.
- In the latter phase of the organisational operation, from about the middle of the 90's until now, the more important companies, with special experts has developed their *evaluation on their environmental performance*, characterising the environmental effects of their activity. The action plan, complementing of the survey activities, together with the approval of the responsible special authority, can care the prevention of the exposed anomalies, too. It makes us satisfied, that the 8 largest companies has taken part in this work.
- The leading activity of our present days is the forming of the *ISO 14000 series*. at this time our 4 largest companies are working on the introduction of the system, and 3 further companies has already planned their introduction.

The result of the forming and operation of the new organisational forms can be already seen. Firstly the data service connecting to the hazardous wastes has become more correct, the collective sites of the works have been built, the order of the administration was formed. We think it important, that as the result of the controlled activity, the number and the quantity of the hazardous wastes, as kind of materials has been increased.

2.5 Inhabitants liaisons

In the changed role division of the players of the society, another projection of the inhabitants-companies liaison is also under changing. The representatives of the former sphere, com-

pleting with the activists of the civil organisations, after the infantile disorders of the green movements, are informed in more and more place about the real environmental protection effects and risks of the production processes, and they will be less and less the sufferers of the news based on darkness or deception.

In the process with a lot of players the task of the production companies is completing with more and more things to do. Over the obligations laid in the laws, they have to concentrate better for the care of the liaisons with the inhabitants. The accurate information of the audience, as well as the wish to strengthen the confidence between the partners advances the media-liaisons, and the live meetings. The mutual confidence can be formed and maintain only with complete, accurate information. In this process the press also has to find its own objective role.

Our company also takes its part from this task. We are taking part in front of the region and the country in the forming of the accurate environmental protection view. For this aim, in the frame of civil origination we are organising discussion evenings on the given topics of the environmental protection, moreover we are writing information or scientific level publications. The demand for this is present: in our region the dialogue is continuing on the channels of the TV and radio, in clubs organised by civil origination or in the newspapers of the county, too.

During the liaisons it has to be accentuated among the participants: the forming of the environmental protection as all the other production activities is also a historical progress. The demand for it is arising in a given level of the development of the society, and the tasks can be fulfilled depending on the demands of the players and the economical sources.

A Appendixes

1995	Binding of the dust at the discharging end of the Sinter Plant
1996	Solution of the gas exhausting of the painting shop of the DFK Ltd.
1996	Building of the blast furnace gas torch
1996	Solution of the dust separation of the arc furnace of the DFK Ltd. Casting Mill
1997	Finalising of the dust exhausting at the sand regeneration shop of the DFK Ltd. Casting Mill
1997	Exhausting of the combustion gases of the hot dip galvanising pots
1997	Improvement of the exhausting of alkaline and acid pots
1997	Survey of the efficiency-increasing at the multicyclons of the Sinter Plant
1997	Procurement of continuous exhausting gas analysing instrument in the Lime Mill
1997	Forming of the labour environmental laboratory at the Health Protection Institute
1998	Finalising of the environmental protection investments at the 3rd coking block
1998	Changing of the burners at the pusher furnaces of the Hot Rolling Mill
1998	Dust exhausting at the blast furnace casting mill, 1st stage
1998	Reconstruction of the Cold Rolling Mill top-hat furnaces

Table 1: Air-purity protection measurements of the DUNAFERR Company Group

1997	Environmental protection evaluation of the canal system of the Company Group
1997	Reconnection of the communal waste water canals
1997	Settlement of 4 oil skimming and sludge separating equipment
1997	Settlement of waste water managing equipment into the Panel-radiator Shop
1997	Environmental protection evaluation of the Sludge Valley
1998	Renewing of the Qualitest Kft. Environmental Protection Laboratory
1999	Commissioning of the waste water cyanide removal station
1999	Starting of the oil-catch engineering
1999	Commissioning of the automatic waste water sampling station at the BOB-upper canal

Table 2: Water cleanness protection measurements of the DUNAFERR Company Group

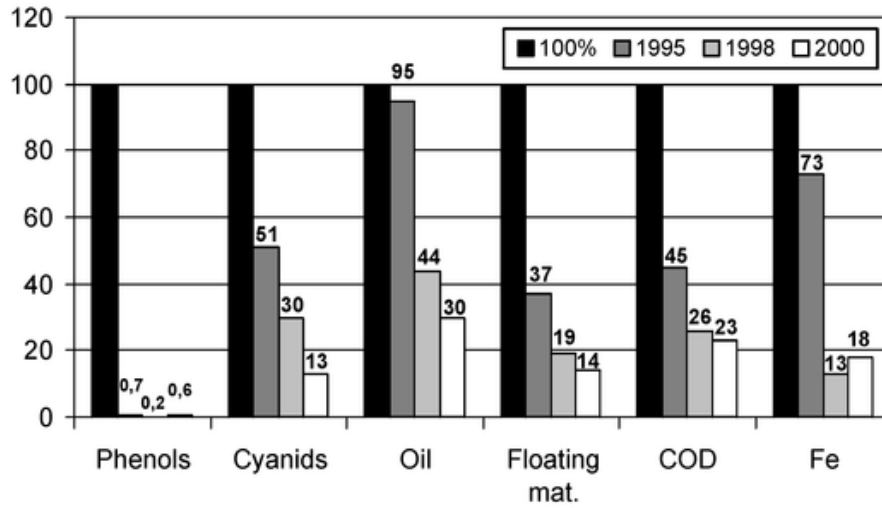


Figure 1: Forming of the relative water contamination of the DUNAFERR Company Group (limit value = 100 %)

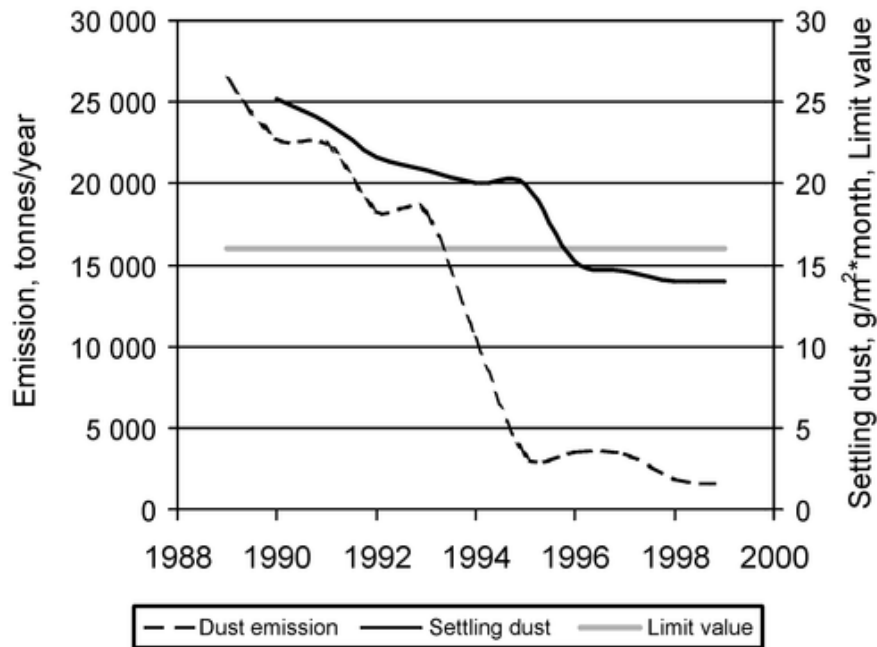


Figure 2: Forming of the dust emission of the Company Group and the air purity of the town

1984	Starting of the processing of the slag deposit
1985	Commissioning of the exploder mill
1989	Building of a provisional hazardous waste storing site with 20000 m ³ capacity
1997	Elaboration of the full-scale environmental protection evaluation of the FERROMARK Ltd.
1998	Starting of the recultivation of the slag deposit
1999	Commissioning of the monitoring system at the slag deposit and slag processing site
1999	Modification of the hazardous waste deposits according to the 102/96 regulation

Table 3: Measurements of the DUNAFERR Company Group connecting to the wastes and hazardous wastes

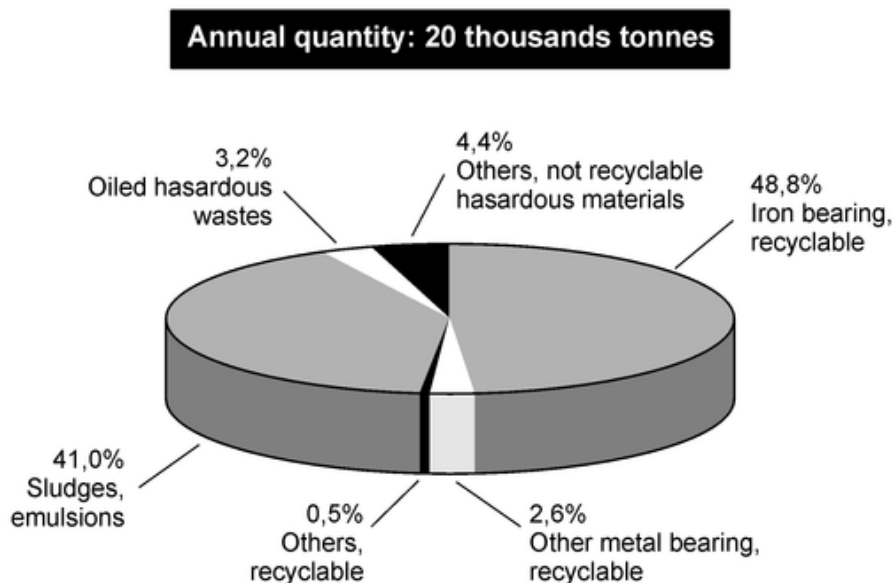


Figure 3: The quantity and grouping of the hazardous wastes of the Company Group