



LEGISLATIVE ASPECTS CONCERNING THE LEATHER WASTES

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Abstract: *This paper underlines the current legislation and compliance issues leather waste in different waste groups according to relevant legislation and shows that, although seemingly harmless waste of skin sometimes contain dangerous compounds. As presented risks to human health were some restricted substances in leather. Since 2001 Romania had preoccupation in national legislation on waste management, but some categories, such as leather waste are not framed to this category. Also, another goal is implementing the EU management/storage strategy of industrial waste. Unfortunately, Romania imports huge quantities of used clothing and shoes. Transport, storage and use of them are poor, and many of these are subsequently stored waste by the fact that it is even sometimes improperly discarded.*

The paper also shows the statistics on waste management in the Bihor County by activity of national economy and by activity of industry at level of CANE REV.2 Section.

Analyzing the postings on Internet regarding the sale and purchase of leather wastes in Romania, it was found that there are the following 'categories' of wastes: leather goods, leather from coats, leather from footwear industry, suede, leather, leather resulting from the production of upholstery. It was found that most car buyers use waste leather upholstery. It is recommended that production companies to highlight more transparent their inventory textile and leather waste on types for those interested (including online) can access/capitalize them.

Key words: *tanning sector, legislation, codes, management, convention*

1. INTRODUCTION

Based on the definition in 2001 [1], stating that "waste - any substance or product in the categories set out in Annex no.1, one that the owner is no longer using or having the intention or obligation to stop using it "(Emergency Ordinance no. 16/2001), the concept has evolved through the implementation of Directive 2008/98/CE [2] in national law. Thus, according to Law 211/2011 [3] wastes are "substances or objects which the holder discards them or intends to discard them or he is required to discard".

As for the classification of wastes with reference to the classification of leather wastes, it is remembered:



- According to Law no. 211/2011, provenience → C. Production wastes resulting from industrial or agricultural technological processes → C1 industrial wastes stock that European norms classify them in Class 1 as hazardous industrial wastes, but nontoxic; Class 2 as hazardous industrial and toxic wastes;
- According to Directive 2006/12/CE [4] → Q1 Production or consumption residues not otherwise specified below; Q14 Products which are no further useful to the holder; Q16 Any materials, substances or products which are not included in the above categories;
- According to the European Wastes Catalogue EWC (The European Waste Catalogue (EWC) [5] and HG. 856/2002 [6] – Categories of waste: 04. Waste from leather, fur and textiles categories. Subcategory: 04 01 leather and fur waste industries (with 10 subcategories).

2. RAW MATERIALS AND LEATHER INDUSTRY

In the production of leather, leather goods and footwear, Europeans have a long tradition and the raw materials of the tanning industry are hides and skins of which over 99% are derived from domestic animals.

Leather is a constituent material, and, in Europe, the first destination use of leather is the production of leather for uppers for the footwear sector (41% on total). Other destinations are: furniture upholstery 17%, upholstery for cars 13%, Leather goods 19%, garments 8%, aircraft, boats etc. 2% [7].

According to The First Social & Environmental Report of the European Leather Industry [7], in 2013, the EU leather industries are composed of nearly 24.000 companies and 400.000 employees. The total yearly turnover is reported to be more than 31 billion Euros, comprised of the following markets: 3.8% EU member States' sales in their domestic market, 60.7% intra-EU trade, 35.5% extra-EU exports.

3. ARE LEATHER WASTES HAZARDOUS?

Although seemingly harmless, some types of leather waste can be dangerous. Thus, Law no. 265 of May 15th, 2002 [8] to accept amendments to the Basel Convention (1989) on the Control of Transboundary Movements of Hazardous Wastes and their Disposal [9], include as hazardous waste in List A at A3 category Wastes containing principally organic constituents, which may contain metals and inorganic → A 3100 scraps and wastes of leather or synthetic leather, which are not suitable for the production of leather articles containing hexavalent chromium compounds or biocides; A 3110 fur waste containing hexavalent chromium compounds or biocides or infectious substances.

From this perspective, the Research Institute for Leather and Footwear in Romania through Research Department of Leather aims, as special activity regarding fundamental research, to optimize alternative technologies "that remove chromium by studying the behavior of other chemicals tanning agents and their chemical modification so as to ensure the effect of tanning".

Regarding legislation on transport of hazardous and non-hazardous waste in Romania is regulated by HG 1061/2008 [10]: "(2) The procedure for regulation and control of shipments of waste is applied to hazardous and non-hazardous waste listed in Annex. 2 to the Government Decision no. 856/2002 relating to waste management records and for the approval of the list of wastes, including hazardous wastes, with subsequent"; "(4) It is forbidden to carry any kind of waste from the place of production to that of the collection/temporary storage/treatment/recovery/disposal, without compliance with this decision."

Regulation (CE) No. 1907/2006 provides that if a Member State considers that the



manufacture, marketing or use of a substance such as a mixture or in an article presents a risk to human health or environment, risk that is not adequately controlled and must be addressed, it must prepare a file after notifying its intention to the European Chemicals Agency [11]. On this basis, in 2011, France showed that the substance dimethyl fumarate (DMF - a biocide used for preventing molds that may damage furniture or leather shoes during storage or transportation in a humid climate) contained in articles or parts thereof, in concentrations greater than 0,1 mg/kg, presents a risk to human health and it was proposed the restriction of this substance.

Other substances have been restricted in the leather industry according to Regulation (CE) No. 552/2009 of June 22nd, 2009 of Amending Commission of Regulation (CE) No. 1907/2006 of the European Parliament and of the Council concerning the registration, evaluation, authorization and restriction of chemicals (REACH) as regards Annex XVII, for example [12]:

- Cadmium - the use has been prohibited for determining the following mixtures or articles manufactured from polymers or copolymers of vinyl chloride: synthetic leather [Code 4202];
- azo dyes and azo substances – the use has been prohibited in textile and leather articles in concentrations above 30 mg/kg (0.003% by weight).

4. LEATHER WASTE MANAGEMENT IN ROMANIA AND BIHOR COUNTY

Thus, according to Romanian Statistical Yearbook 2015 and 2016 Civil employment, by Activity - Water supply; sewerage, waste management and decontamination activities (CANE Rev.2 Sections) was 123 thou persons in 2012, 2013 and 126 thou persons in 2014, 2015 (end of year).

The following provides some statistics on waste management in the Bihor County by activity of national economy and by activity of industry at level of CANE REV.2 Section:

Table 1: Employment, average number of employees and number of employees by activity of national economy (Bihor County Statistical Yearbook, 2016)

ACTIVITY OF NATIONAL ECONOMY AT LEVEL OF CANE REV.2 SECTION (end of year)	End of year...				
	2011	2012	2013	2014	2015
1. EMPLOYMENT (thou persons)					
<i>Economy total</i>	263.0	268.3	266.4	264.8	262.8
<i>Industry</i>	66.6	66.8	67.7	68.8	72.1
<i>- Water supply; sewerage, waste management and decontamination activities</i>	2.8	2.9	3.0	3.0	3.1
2. EMPLOYMENT STRUCTURE (percentage)					
<i>Economy total</i>	100.0	100.0	100.0	100.0	100.0
<i>Industry</i>	25.4	24.9	25.4	26.0	27.4
<i>- Water supply; sewerage, waste management and decontamination activities</i>	1.1	1.1	1.1	1.1	1.2
3. AVERAGE NUMBER OF EMPLOYEES (persons)					
<i>Economy total</i>	144,475	143,590	145,910	150,333	153,529
<i>Industry</i>	52,838	53,706	54,101	57,039	57,804
<i>- Water supply; sewerage, waste management and decontamination</i>	2,305	2,448	2,326	2,385	2,500



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<i>activities</i>					
4. NUMBER OF EMPLOYEES BY ACTIVITY (persons)					
<i>Economy total</i>	152,032	155,084	155,833	159,700	166,685
<i>Industry</i>	56,312	56,986	57,033	59,320	61,167
<i>- Water supply; sewerage, waste management and decontamination activities</i>	2,474	2,634	2,623	2,611	2,686

Table 2 Average number of employees and number of employees by activity of industry at level of CANE REV.2 DIVISION (Bihor County Statistical Yearbook, 2016)

ACTIVITY OF INDUSTRY AT LEVEL OF CANE REV.2 DIVISION	End of year...				
	2011	2012	2013	2014	2015
1. AVERAGE NUMBER OF EMPLOYEES (persons)					
<i>INDUSTRY - TOTAL</i>	263.0	268.3	266.4	264.8	262.8
<i>MANUFACTURING</i>	66.6	66.8	67.7	68.8	72.1
<i>- Tanning and dressing of leather; manufacture of travel and leather goods, harness</i>	16,413	16,684	16,420	17,434	16,987
2. NUMBER OF EMPLOYEES, BY GENDER (total persons/women)					
<i>INDUSTRY - TOTAL</i>	56312/ 28749	56986/ 28595	57033/ 27956	59320/ 29039	61167/ 30411
<i>MANUFACTURING</i>	49948/ 27633	50226/ 27392	50566/ 26844	52942/ 27967	55088/ 29360
<i>- Tanning and dressing of leather; manufacture of travel and leather goods harness</i>	17791/ 12111	18642/ 12506	18073/ 12267	17758/ 12083	17184/ 11430

However, in Romania there are few centralized data on waste leather or statistics as there is in Europe. For example, in The First Social & Environmental Report of the European Leather Industry [7] shows that European tanneries produce on average 2.14 kilograms of waste for every square metre produced (in Figure 1).

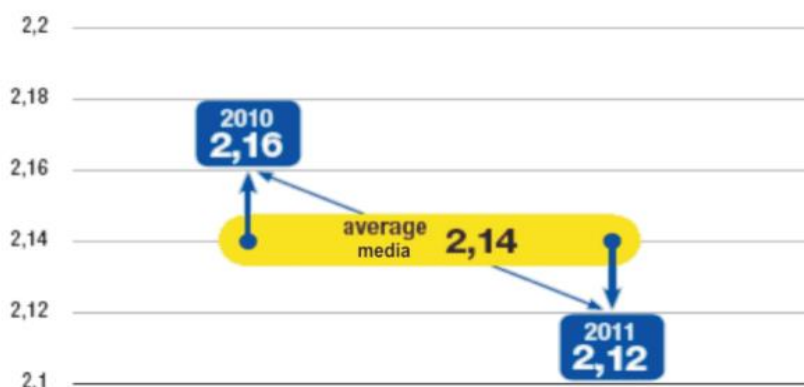


Fig. 1: Waste production per product unit 2010-2011 (kg/m)



5. CONCLUSIONS AND CONCERNS

The Environmental principles of EU tanning sector are mentioned in the Framework Agreements and Joint Statements done by COTANCE and IndustriAll. The leather industry, in Europe, tanning wastewater quality is a priority and is monitored. The Europe's tanneries consume today less water and energy and they have substituted dangerous chemicals, because the good water management represent almost 60% of total environmental costs [7].

With regard to leather wastes are recyclable or not, we can see that Romania since 2001 has no legislative concerns through OU no 16 from January 26th, 2001 on waste management which provides in Article 2 groups of recyclable industrial waste according to Annex 1. Such textile wastes occur in recycled industrial waste group (with metal, glass, paper, plastic products and rubber) but not the leather ones. As textile waste, leather waste are generated both from own production and exports and imports of shoddy second-hand goods that convert into waste in a short time.

For at least 20 years in Romania have been entering huge amounts of second-hand clothes and shoes. Their transport, storage and capitalization are unsatisfactory. Many of them even if they are brought in a good shape, later they become waste because they are improperly stored and sometimes even abandoned. In the Shoe and Leather Research Institute (ICPI) one of the main objectives of the Research Department Leather is: Promoting the concept of "clean production" and new cleaning systems through [15] "replacing harmful chemicals with products with low toxicity; recovery/recycling of wastes resulting from technological process; recovery/reuse of useful substances resulting from processing; wastewater treatment by modern methods in order to provide advanced pollution". Also, another goal is implementing the EU management/storage strategy of industrial waste.

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[11] <http://www.anpm.ro/documents/12220/2194656/Reg+412-2012.pdf/92e5e2f4-909e-4e9a-94c9-d7b20f37cd98?version=1.0>, consulted 02.2017

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[13] Romanian Statistical Yearbook 2015 and 2016

[14] Bihor County Statistical Yearbook, 2016

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