

# STILL FASHION VICTIMS?

Monitoring a ban on sandblasted denim



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Fair Trade Center is a non-governmental organisation (NGO) that promotes ethical trade by monitoring Swedish companies that trade with low-income countries. We aim to promote socially and environmentally responsible trade through dialogue, campaigns and consumer information. <http://www.fairtradecenter.se/english>

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# INTRODUCTION

**S**andblasting - the deadly method used to create the fashionable pre-torn look on denim - has been widely practiced for more than a decade within the garment industry<sup>1</sup>. It is part of a tenacious denim trend to make denim look worn that started in the 1980s.<sup>2</sup> In 2004, researchers and doctors at the Turkish University of Atatürk made the first connection between sandblasting denim and the contraction of silicosis. Today, it is estimated that approximately 55 Turkish sandblasting denim workers have died, and that around 5 000 or more could be infected with silicosis<sup>3</sup>. In 2009, the Turkish government banned the practice. It made many sandblasting businesses relocate to less regulated countries, such as Bangladesh, China, Pakistan and Egypt<sup>4</sup>. Until recently, little was known about the sandblasting situation in these countries. Research by the Clean Clothes Campaign in Bangladesh confirms a similar and perhaps worse situation compared with that in Turkey. Yet, there are still no certain estimates of how many sandblasting workers have been infected with silicosis<sup>5</sup>.

In 2010, Fair Trade Center studied how 17 clothing companies in the Swedish market managed the risks connected to sandblasting in their global supply chains<sup>6</sup>. Sandblasting was used or had been used prior to the study by several companies (see table 1). Today, all of them have announced an official ban on sandblasting. However, while more clothing companies indicate a will to end the use of sandblasting in their supply chains, they face long-term challenges in their work to ensure effective implementation of their bans.

## AIM, METHOD AND SELECTION

**T**his follow-up study highlights some of the achievements of the clothing companies' work with banning sandblasting since Fair Trade Center's last study in 2010. It also aims to describe the current challenges of ensuring effective follow-up of a sandblasting ban, as well as the clothing companies' use of alternative methods to sandblasting.

The study covers 17 companies in the Swedish clothing market: Acne, Filippa K, Gina Tricot, H&M, Indiska, Inditex (Zara, Massimo Dutti), J. Lindeberg, KappAhl, Lindex, MQ, Nudie Jeans, RNB Retail and Brands (Polarn & Pyret, Brothers, Sisters, JC), Tiger of Sweden, Varner-gruppen (Cubus, Dressmann, BikBok, Carlings, Solo), Whyred, WeSC and Åhléns. Some of the companies also have a strong denim focus. MQ has been added since the last study. Since H&M acquired the remaining shares in Fabric Skandinavien in 2010<sup>7</sup>, the company is now included in the information related to H&M.

In late June 2012, the studied companies received initial survey questions, followed by additional follow-up questions and questions of clarification sent in October, November and December. They are available upon request. The studied companies have had the opportunity to read and comment on the information stated about them in this study before publication. Information about the companies' work on sandblasting has also been retrieved from separate policies and guidelines, as well as from the companies' websites. External resources and interviews have also been used for background information. In order for Fair Trade Center to be able to verify how the situation looks at the studied clothing companies' factories, field research would be required, which is not within the scope of this report.

Next, we will describe how sandblasting is used to create the worn look, and explore in detail the negative medical impact sandblasting has on the workers who use the method.

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1 Riddselius, C. (2010). "Fashion Victims – A report on sandblasted denim", Fair Trade Center, p. 5.

2 Ibid.

3 Ibid. p. 8-9 and Green Prophet (2012). "Silicosis kills 50th worker at Turkish denim sandblasting factory", 10 February 2012. [Internet] Available at: <http://www.greenprophet.com/2012/02/silicosis-kills-50th-worker-at-turkish-denim-sandblasting-factory/> (Last accessed: 2012-11-26). Interview with Nesperiz Yesim Yasin, Public Health Expert, Turkish Solidarity Committee of Sandblasting Labourers, 2012-12-10.

4 Cappiccio, Silvana. (2009). "Jeans, the human cost of a fashion icon". HesaMag #1, autumn-winter, p. 46.

5 Interview with Nesperiz Yesim Yasin, Public Health Expert, Turkish Solidarity Committee of Sandblasting Labourers, 2012-12-10.

6 The participating companies in the previous study were Indiska, RNB Retail and Brands, Whyred, Inditex, Tiger of Sweden, Fabric Skandinavien, WeSC, Åhléns, KappAhl, H&M, Filippa K, Varner-gruppen, Nudie Jeans, Acne Studios, J. Lindeberg, Lindex and Gina Tricot.

7 H&M Press release (2010). "H&M acquires remaining shares in Fabric Skandinavien" [Internet] Available at: <http://about.hm.com/content/hm/NewsroomSection/en/NewsRoom/NewsroomDetails/527476.html> (Last accessed: 2012-10-18).

## DEVIL IN DISGUISE

**S**andblasted denim is created by forcing abrasive particles in the form of sand across the denim at high speed. It shapes the fabric and makes it smoother and cleaner and thus a “worn-out” look is created. The worker is infected with silicosis when inhaling invisible, but extremely dangerous particles of sand while working. The sand becomes lethal when it contains dangerous levels of silica.

Sandblasting can either be performed manually or mechanically with equally deadly consequences. In the manual version, which is the most commonly used, the workers use a gun in combination with compressors to force the abrasive particles on to the denim. This practice takes place openly in an environment without sealed blasting cabinets and ventilation thus making the particles airborne and inhaled directly. Mechanical sandblasting takes place in more controlled blasting cabinets but is also proven to be hazardous to workers. For example, The Clean Clothes Campaign report (2012) on sandblasting in Bangladesh showed that the workers were still exposed to the silica sand because they were not wearing sufficient Personal Protective Equipment, such as face masks, goggles and protective clothing<sup>8</sup>. The fact that the method is cheap and time-efficient as well as easy to handle, has clearly contributed to its widespread use in clothing companies’ supply chains<sup>9</sup>.

Primarily common in the construction and mining industry, silicosis causes difficulties to breath. The disease cannot be cured and if the worker is severely infected, the worker’s heart will eventually stop. There are four different types of silicosis - chronic simple silicosis, accelerated silicosis, complicated silicosis and acute silicosis. Chronic simple silicosis appears after 10-30 years after exposure. Symptoms include shortness of breath, persistent cough, tachypnoea, fatigue, weight loss, chest pain and fever. Accelerated silicosis occurs 5-10 years after exposure. Complicated silicosis causes severe symptoms and is related to acute silicosis. Acute silicosis can be detected a few weeks to five years after exposure to high concentrations of silica dust. Symptoms include severe dyspnoea and cough and may lead to a quick death<sup>10</sup>.

Furthermore, silicosis is complicated to diagnose correctly, as its symptoms are similar to those of tuberculosis. Patients may also have tuberculosis and silicosis at the same time, which necessitates extra pulmonary function tests to be made. However, if the silicosis has not progressed far, it can still be hard to diagnose. In Bangladesh, many medical specialists, doctors and nurses are unaware of the complications connected to diagnosing sandblasting workers in the denim industry. Interestingly, workers in the Turkish denim industry developed silicosis faster (within months) than workers in the Turkish coal mining industry (within years) <sup>11</sup>.



Sandblasting in Bangladesh using minimal Personal Protective Equipment.  
Credit: Altemeier & Hornung Filmproduktion

8 Clean Clothes Campaign. (2012). “Deadly Denim – Sandblasting in the Bangladesh Garment Industry”, March, p. 5.

9 Ibid. p. 9.

10 Ibid. p. 10.

11 Michael I. Greenberg, MD, MPH, Javier Waksman, MD, and John Curtis (2007). Silicosis: A Review, MD, [Internet] Available at: [http://www.sertox.com.ar/img/silicosis\\_article.pdf](http://www.sertox.com.ar/img/silicosis_article.pdf), pp. 394-412 and Clean Clothes Campaign. (2012). “Deadly Denim – Sandblasting in the Bangladesh Garment Industry”, March, p. 11. (Last accessed: 2012-11-16).

## LACK OF SUFFICIENT SANDBLASTING REGULATION

The European Economic Community banned manual sandblasting in 1966. Sweden banned the practice in 1992, but exempted wet sandblasting and sandblasting in ventilated blast rooms<sup>12</sup>. As previously mentioned, the Turkish government reacted to the sharp rise in silicosis affected sandblasting workers by implementing a government ban<sup>13</sup>. However, there is no universal or even regional ban on sandblasting in the world. The Clean Clothes Campaign, the garment industry's largest alliance of labour unions and non-governmental organizations, is an example of an actor that works to influence the European Union to ban the import of garments produced by using the sandblasting technique. Also worth mentioning, is the multi-stakeholder initiative Fair Wear Foundation (FWF). Due to the very serious health hazards of unsafe abrasive blasting, the organization adopted a policy against use of the technique in January 2011. The organisation verifies how affiliates have implemented policies through factory audits and the Brand Performance Check process, where Fair Wear Foundation looks at the companies' sourcing practices<sup>14</sup>. Members of Fair Wear Foundation include Filippa K, Nudie Jeans, Acne and J. Lindeberg. In addition, The International Textile, Garment and Leather Workers Federation (ITGLWF)<sup>15</sup> encourages companies to sign a global apparel ban on sandblasting. This has been done by H&M and Inditex. Finally, Business Social Compliance Initiative (BSCI) is a business-led initiative that encourages its members to ban sandblasting in their supply chains. Members include Åhléns, Lindex, RNB Retail and Brands and MQ.

In the next section, we take a look at the clothing companies' work to officially announce a sandblasting ban.

## A MAJORITY OF THE CLOTHING COMPANIES NOW HAVE AN ANNOUNCED AN OFFICIAL SANDBLASTING BAN

The first step in order to ban sandblasting is to announce one's commitment to a ban. We mapped below how many clothing companies have announced such as commitment, and whether they previously used sandblasting in their supply chains as well as their current production countries for denim.

Table 1. Implementing an official ban on sandblasting

NAME OF COMPANY	HAS AN OFFICIAL SANDBLASTING BAN? <sup>16</sup>	HAS PREVIOUSLY USED SANDBLASTING IN THEIR DENIM SUPPLY CHAIN PRODUCTION? <sup>17</sup>	CURRENT DENIM PRODUCTION COUNTRY/IES
Acne	Yes.	Yes, in Italy.	Turkey, Italy and Albania
Filippa K	Yes, but no official document, they use an internal policy.	No.	Italy and Romania
Gina Tricot	Yes.	Yes, in China.	Turkey, China, Bangladesh and Pakistan
H&M	Yes.	Yes, in Turkey, Bangladesh, China and Pakistan.	Turkey, Bangladesh, China and Pakistan
Indiska	No.	No.	India and China
Inditex	Yes.	Yes, in China and Bangladesh.	Turkey, Morocco, Portugal, China, Bangladesh and Pakistan
J. Lindeberg	Yes.	No.	Turkey, Romania and Italy
KappAhl	Yes.	Yes, in China, Bangladesh, Turkey and Pakistan.	China, Bangladesh and Turkey
Lindex	Yes.	Yes, in Turkey, Bangladesh and China.	Turkey, Bangladesh, Pakistan and China
MQ	Yes.	Yes, in Bangladesh, China and Thailand.	China, Bangladesh, Thailand and Turkey
Nudie Jeans	Yes.	Yes, in Italy.	Italy
RNB Retail and Brands	Yes.	No.	Turkey, Pakistan, Bangladesh and Thailand
Tiger of Sweden	Yes.	Yes, in Italy.	Italy, Romania and Tunisia.

<sup>12</sup> Riddselius, C. (2010). "Fashion Victims – A report on sandblasted denim", Fair Trade Center, p. 5.

<sup>13</sup> Ibid. p. 8.

<sup>14</sup> Mail conversation with Annabel Meurs, International Verification Coordinator, Fair Wear Foundation, 2012-11-10

<sup>15</sup> The International Textile, Garment and Leather Workers Federation (ITGLWF), International Metalworkers' Federation (IMF), International Federation of Chemical, Energy, Mine and General Workers' Unions (ICEM) merged in 2012 and became IndustryALL Global Union.

<sup>16</sup> As per November 2012.

<sup>17</sup> As per November 2010. For more information, see Riddselius, C. (2010). "Fashion Victims – A report on sandblasted denim", Fair Trade Center, pp. 3

NAME OF COMPANY	HAS AN OFFICIAL SANDBLASTING BAN? <sup>16</sup>	HAS PREVIOUSLY USED SANDBLASTING IN THEIR DENIM SUPPLY CHAIN PRODUCTION? <sup>17</sup>	CURRENT DENIM PRODUCTION COUNTRY/IES
Varner-gruppen	Yes.	Yes, in China, Turkey.	Turkey, Bangladesh, China, Pakistan and Egypt
WeSC	Yes, but no official document, they use an internal instruction.	No.	Vietnam
Whyred	Yes, but no official document, they use an internal instruction.	Yes, Turkey, Portugal and Italy.	Turkey
Åhléns	Yes.	No.	China, Bangladesh and Turkey

Studying the table, out of the 17 companies, 16 have now prohibited in one way or another, their suppliers from using sandblasting. For example, H&M announced their ban in 2010, and updated it in 2012. The Norwegian corporate group Varner-gruppen is currently updating its Code of Conduct where their ban will be further specified in comparison to last version.

Although Whyred and WeSC do not have official documents, the companies are instructing their suppliers not to use the sandblasting in their denim production. Filippa K has also instructed its suppliers not to sandblast and the company's policy will be audited in 2012 and in 2013. MQ, which was not included in the last study, banned sandblasting in 2008. Previously, they had four suppliers that used the practice in Bangladesh, China and Thailand. Furthermore, Indiska does not have an official ban, which Renée Andersson, the company's CSR Manager, comments on by saying that "we have never been using sandblasting or the look of sandblasting in our collections, and do not intend to do so in the future"<sup>18</sup>.

Below we will look at the content of the clothing companies' sandblasting policies.

## PREVENTIVE MEASURES TO PROMOTE A SANDBLASTING BAN

### APPLICATION OF POLICY

**F**or a ban to be efficient, it needs to be underpinned by a concrete policy. This could take the form of a regular policy (majority of the studied companies), or consist of internal instruction (Whyred, WeSC) or part of Health and Safety Guidelines as part of Code of Conduct (Nudie Jeans). A policy not to use sandblasting could apply only to the production of the company's specific denim products. In this case, the supplier could still practice sandblasting on other buyers' denim products in the same factory, thus making it more difficult for the clothing company to maintain a ban<sup>19</sup>.

Most of the companies in this study have policies that at minimum apply to the clothing companies' own products and not to the suppliers' total production. Nudie Jeans, Varner-gruppen, RNB Retail and Brands, Lindex, MQ, Tiger of Sweden, KappAhl and WeSC are examples of such companies. WeSC does not use sandblasting and factories that have sandblasting capacities. Nudie Jeans says that most of the other brands that use the same factories as them have similar policies. RNB Retail and Brands states that none of their denim suppliers have sandblasting capacities. As a consequence, the company is thinking about reviewing its sandblasting policy. Furthermore, Lindex is investigating if its policy could be extended to apply to their supplier factories as well. Varner-gruppen says that most suppliers they use do not have sandblasting capacities. MQ has a goal to operate at factories where there are no sandblasting capacities. Tiger of Sweden adds that they use facilities in Italy for the washing of Tiger of Sweden products. Acne says that sandblasting is forbidden at their Turkish suppliers and Whyred uses one wash house in Turkey with no subcontractors that has no capacity to sandblast. Indiska claims the question is not applicable as they have never used sandblasting.

There are also a few companies, such as H&M, Gina Tricot, Åhléns, J. Lindeberg, Filippa K, whose policies apply to the total production units of their suppliers or do not allow suppliers to have sandblasting capacities at all. From September 1st 2012, H&M no longer accepts that sandblasting takes place for other brands, in factories producing H&M orders<sup>20</sup>. Inditex says that if the supplier uses harmful practices, even in cases where

<sup>18</sup> Mail conversation with Renée Anderson, CSR Manager, Indiska, 2012-09-17.

<sup>19</sup> Clean Clothes Campaign. (2012). "Deadly Denim – Sandblasting in the Bangladesh Garment Industry", March, p. 47.

<sup>20</sup> H&M Policy on Sandblasting, August 2012 revised. (internal document)

those harmful practices are not directly linked to the manufacturing of their products, it would mean supplier in compliance with Inditex' Code of Conduct which "aims to improve labour conditions of the workers of Inditex' suppliers as a whole"<sup>21</sup>. Filippa K says it did not previously use sandblasting and has worked with a Code of Conduct since 2000. It has developed this policy in order to "make sure that sandblasting is not done for other brands at the factories"<sup>22</sup>. Finally, Åhléns requires external brands to follow its sandblasting policy.

Even though clothing companies' policies apply to the production of their specific products, in practice, suppliers may not have sandblasting capacities anyway or companies do not place orders with suppliers that have sandblasting capacities. H&M, Gina Tricot, KappAhl, WeSC, RNB Retail and Brands, Inditex, Åhléns and Whyred do not place orders with suppliers that have sandblasting capacities. Filippa K, Nudie Jeans and Tiger of Sweden do not actively place orders with companies that lack sandblasting capacities. Lindex and MQ stated that they would promote their sandblasting bans if they discover that their suppliers have sandblasting activities. Based on J. Lindeberg's own experience it has not found such sandblasting facilities with suppliers. Acne has the same suppliers as before, but the company checks if they have sandblasting capacities.

However, there are five companies that currently use suppliers with sandblasting capacities. First, Acne works with one supplier in Italy that cooperates with washing houses that can perform sandblasting in a safe environment and with Personal Protective Equipment. Second, Tiger of Sweden uses alternative methods in safe denim facilities in Italy. However, the company says that most Italian facilities have sandblasting equipment, but that the sandblasting takes place under controlled circumstances. Third, Varner-gruppen says that when they started implementing the ban on sandblasting they mapped the situation of its suppliers and most of them had phased out this method. Fourth, MQ also made a similar mapping and identified one supplier that had the equipment in-house intended for domestic market. The company has "strongly recommended them to stop this process"<sup>23</sup>. Fifth, RNB Retail and Brands says that sandblasting capacities do not exist in their suppliers' denim factories, but that they have one supplier with sandblasting equipment for other product types at one of their production units. The company has also strongly encouraged the supplier to stop using the method.

We continue with describing how clothing companies can work with design and lead times in order to prevent the use of sandblasting.

## MOVING AWAY FROM THE FADED "WORN-OUT" DESIGN?

One way to work preventively to promote a sandblasting ban is to change the design of the denim in order to move away from the worn-out look<sup>24</sup>. According to Chris Koeleman, Lecturer at Amsterdam Fashion institute, the worn-out look is still relevant as part of a very diverse denim trend<sup>25</sup>. Thus, many companies in the Swedish clothing market do not change the design due to customer demand. Instead they use the worn-out looks that can be achieved by alternative methods in line with agreement with their suppliers and Code of Conducts.

As Gina Tricot states: "Our purpose is to sell fashion, and when it includes worn-out designs it will be a part of the fashion assortment, at the same time we also have a basic "rinse wash" in the assortment. Its products are developed in cooperation with designer, buyer and supplier"<sup>26</sup>. H&M, J. Lindeberg, Tiger of Sweden, Varner-gruppen, Acne, Inditex, Whyred and RNB Retail and Brands offer different finishes to meet the demands of the worn-out look and monitor the methods used in line with their instruction to suppliers and Code of Conducts. Filippa K will probably be using the worn-out look in the future but will use alternative methods. MQ has no desire to move away from the worn-out look, "but the business strategy for the coming season is that our assortment should have a cleaner look and less worn out washes"<sup>27</sup>. Lindex has not altered their designs from the worn-out look with no rationale as to why. Nudie Jeans prefer to use alternative methods because "We don't want the even result that you can get with sandblasting"<sup>28</sup>. Åhléns agrees that the "worn-out look" is a fashion trend but that it is not part of their collection that is adjusted to its target group. It also said that they do not have jeans with an "extreme" worn-out look, but that they have finishing on products to give them certain qualities<sup>29</sup>.

21 Mail conversation with Aleix Gonzalez, Busquets, Senior CSR and Supply Chain Manager, Inditex, 2012-10-26.

22 Mail conversation with Elin Larsson, Corporate Responsibility Manager, Filippa K.

23 Mail conversation med Hannah Persson, Social Compliance Coordinator, MQ, 2012-09-14.

24 Clean Clothes Campaign. (2012). "Deadly Denim – Sandblasting in the Bangladesh Garment Industry", March, p. 6.

25 Interview with Chris Koeleman, Consultant/Lecturer Textiles and Quality, Amsterdam Fashion Institute, 2012-10-19.

26 Mail conversation with Anna-Karin Wårfors, CSR Manager, Gina Tricot, 2012-09-14, 2012-10-22.

27 Mail conversation with Hannah Persson, Social Compliance Coordinator, MQ, 12-12-07

28 Mail conversation with Sandya Lang, CSR Manager, Nudie Jeans, 2012-08-21.

29 Mail conversation with Anita Falkenek, Sustainability Manager, Åhléns, 12-12-06

Similarly, KappAhl says it does not have “extreme worn-out look” in their shops<sup>30</sup>. Indiska also seldom uses denim as production material and WeSC uses mainly minimal washes for a clean look.

## USING LEAD TIMES AS A PREVENTIVE MEASURE

**A**nother way to work preventively with suppliers’ use of sandblasting is to prolong the lead time for producing a worn-out garment. The negative connection between short lead times and worsening labour conditions is mentioned in *Buying your way into trouble – the challenge of responsible supply chain management*, Acona, 2004<sup>31</sup>. Because the use of sandblasting is time-efficient, suppliers might use sandblasting despite a buyer’s prohibition as it takes less time than using alternative methods<sup>32</sup>. In a fashion-sensitive world, when the latest fashion has to be produced as quickly as possible, it puts pressure on the workers to deliver results<sup>33</sup>.

Out of the 17 companies, 10 claim they adjust their timeline for worn-out garments (Acne, Filippa K, H&M, Inditex, J. Lindeberg, Lindex, MQ, Tiger of Sweden, Varner-gruppen and Whyred). For example, Varner-gruppen, says: “The needed production time-frame which is dependent on many different conditions is discussed and agreed upon before orders are being placed and the delivery date is set.”<sup>34</sup> Gina Tricot did neither indicate “yes” or “no” and stated: “As with all production there is an initial production time, any divergence is communicated and handled by the purchase department and supplier. Different garments have different production times”<sup>35</sup>.

At RNB Retail and Brands, the production lead time is specifically decided for each product depending on the time it takes to produce it. WeSC does not adjust the lead time and at Nudie Jeans the dry and washed jeans follow different timeframes and the supplier can discuss the lead time with Nudie Jeans if needed. Indiska does not have worn-out garment in its collection, and therefore the question does not apply to the company. Åhléns does not have “extreme” worn-out look, and therefore the question does also not apply to the company. KappAhl indicated the same answer as above, that they do not have extreme worn-out looks in their collections.

Next we will map the specific challenges the clothing companies face in their work to monitor sandblasting in their supply chains and if they are able to monitor their suppliers’ subcontractors.

## MONITORING A SANDBLASTING BAN

“Monitoring a ban is difficult for many reasons, particularly considering the use of subcontracting and unregistered workers, which creates a risk of sandblasting taking place at unknown locations and/or during night shifts. Even experts find it difficult to detect whether denim is sandblasted or not. Without frequent visits to the production sites, denim producers cannot easily check which technique is used to create the ‘worn-out’ look on denim.”<sup>36</sup>

-Annabel Meurs, *International Verification Coordinator at Fair Wear Foundation*.

Similarly, in 2011, Råd & Rön, a Swedish consumer magazine, published an article about sandblasting. Its European equivalence visited suppliers of several clothing companies in China, Morocco, Italy and partly Pakistan. The article generally concluded that even though brands had forbidden sandblasting, it was still occurring. Brands also unofficially asked suppliers to sandblast while having prohibited sandblasting officially. The fact that subcontractors used sandblasting hampered the companies’ work to enforce their bans.<sup>37</sup>

The difficulties connected to monitoring a sandblasting ban are also verified in the Clean Clothes Campaign’s report on Bangladesh. According to the interviewees, some factories used sandblasting despite buyer prohibition. Sandblasting was also used without protective clothing for the sandblasting workers<sup>38</sup>. Furthermore, garment workers in Bangladesh are not properly educated about the consequences of sandblasting and they do not experience negative health consequences from their work until the symptoms become untreatable. Another

30 Mail conversation with Eva Kindgren, CSR Manager, KappAhl, 2012-09-05.

31 Acona. (2004). “Buying your way into trouble – the challenge of responsible supply chain management”. Insight Investment Management Limited, pp. 2-38.

32 Clean Clothes Campaign, (2012), “Deadly Denim – Sandblasting in the Bangladesh Garment Industry”, March, p. 23.

33 Ibid. p. 6.

34 Mail conversation with Annabelle Lefébure, CSR Manager, Varner-gruppen, 2012-09-18.

35 Mail conversation with Anna-Karin Wårfors, CSR Manager, Gina Tricot, 2012-09-14, 2012-10-22.

36 Mail conversation with Annabel Meurs, International Verification Coordinator, Fair Wear Foundation, 2012-11-10.

37 Berge, Annika. (2011). “Hur reko är dina jeans?”. Råd & Rön, 2011-08-23. [Internet] <http://www.radron.se/granskningar/Hur-reko-ar-dina-jeans/> (Last accessed: 2012-11-08).

38 Clean Clothes Campaign. (2012). “Deadly Denim – Sandblasting in the Bangladesh Garment Industry”, March, pp. 6, 38.



aspect to take into consideration is that a sandblasting worker is paid better, which is an effective means to engage workers in sandblasting activities.<sup>39</sup>

## CLOTHING COMPANIES' CHALLENGES IN MONITORING SANDBLASTING BAN

Fair Trade Center asked the clothing companies if they saw any challenges connected to monitoring sandblasting in their supply chains. This is what they answered:

Table 2. Possible monitoring challenges in supply chain with regards to sandblasting

NAME OF COMPANY	POSSIBLE MONITORING CHALLENGES IN SUPPLY CHAIN WITH REGARDS TO SANDBLASTING
Acne	Monitoring not possible all the time.
Filippa K	Ensure compliance in total production at subcontractors.
Gina Tricot	The many different steps that textile production involves. The sandblasting that occurs for other customers. Lack of prohibition of sandblasting in many countries.
H&M	Since H&M requires factories to dismantle their sandblasting equipment, sandblasting becomes impossible and therefore there will be no challenges.
Indiska	Indiska was not asked this question as they have never worked with monitoring sandblasting.
Inditex	Inditex has not identified any risks associated with its sandblasting monitoring process.
J. Lindeberg	Stated no challenges.
KappAhl	Suppliers may not adhere to policies.
Lindex	Unauthorized subcontracting.
MQ	Difficult to monitor the suppliers 24/7. If sandblasting was to occur at night, MQ would not have the capacity to control it.
Nudie Jeans	Sandblasting is not used at our suppliers and Nudie Jeans is present at the laundries so there are no challenges.
RNB Retail and Brands	Unauthorized subcontracting.
Tiger of Sweden	Insofar as Tiger of Sweden's suppliers circumvent its code of conducts which they have signed and manage to disguise sandblasting from our four annual visits etc. Then there could be a challenge, which Tiger of Sweden however believes to be minimal.
Varner-gruppen	Risks are the same as when working with CSR in the supply chain, it is to ensure that the information Varner-gruppen receives is updated and correct. Knowing, mapping and monitoring the entire supply chain (not only the first and second tier) is challenging.
WeSC	Lies and deception, as WeSC does not own factories. The company does not have 100% control, regardless of its efforts.
Whyred	Whyred does not see any challenges monitoring a sandblasting ban, as it only uses Turkey with a strong official stance in the matter.
Åhléns	Since Åhléns does not sandblast, that problem does not exist. But generally the company faces the same challenges regarding supplier compliance and subcontractors.

## SANDBLASTING MONITORING SYSTEMS IN PLACE

Almost all clothing companies monitor their suppliers (Acne, Gina Tricot, H&M, Inditex, Indiska, J. Lindeberg, KappAhl, Lindex, MQ, Nudie Jeans, RNB Retail and Brands, Tiger of Sweden, Varner-gruppen, WeSC and Åhléns). Filippa K's monitoring system for sandblasting ban is under development.

Many companies also specifically include sandblasting in their audit methodology (Acne, Gina Tricot, Inditex, J. Lindeberg, KappAhl, Lindex, MQ, RNB Retail and Brands, Tiger of Sweden, Varner-gruppen). For example, Inditex uses specific methodology for the identification of the processes of denim used in laundries. H&M requires their suppliers to dismantle their suppliers' sandblasting equipment, as it is the only way of ensuring 100% that sandblasting is not done. It will not continue auditing dismantled equipment.

As has been stated before, Filippa K's monitoring system for sandblasting ban is under development and therefore the company currently does not check for sandblasting. Indiska does not either check for sandblasting. WeSC works with one vertically integrated factory, where all manufacturing including wash and finish takes place in-house, and the factory has no sandblasting capacities. WeSC also visits the suppliers several times a year. Whyred visits its suppliers frequently. In 2013, the company will be looking into the possibility to become member of Fair Wear Foundation. Nudie Jeans does not check specifically for sandblasting, the company follow-up their suppliers' implementation of health and safety demands. Åhléns says that should there be sandblasting

<sup>39</sup> Ibid. pp. 30, 38.

equipment at the factory they will check that, but today there is no sandblasting equipment at the units the company uses.

## MONITORING SUBCONTRACTORS

In 2011, the European Union endorsed UN Guidelines on Business and Human Rights (UNGP). These guidelines build on three pillars. The first one concerns states' existing obligations to respect, protect and fulfil Human Rights and fundamental freedoms. The second pillar concerns the role of business enterprises as organs of society performing specialized functions, required to comply with all applicable laws and to respect Human Rights. The third pillar concerns the need for rights and obligations to be matched to appropriate and effective remedies when breached<sup>40</sup>. According to these guidelines, companies have a responsibility for their business relations in their entire supply chains and to respect Human Rights and act if Human Rights are violated<sup>41</sup>.

Out of 17 companies, 13 follow-up subcontractors, although some said they only do so to a certain extent. H&M follow up on all 1st tier manufacturing and processing units. This tier includes anything that has to do with manufacturing of garments, cutting, sewing, washing, embroidery etc. This can be done in suppliers' own factories or in subcontracting factories not owned by the supplier. The 2nd tier includes fabric mills and dyeing houses, which means any production that deal with the material before it gets cut and sewn in to ready garments. 3rd tier includes ginning and spinning and the 4th tier includes raw material, for example raw resource gathering such as cotton farms. Varner-gruppen says it monitors their suppliers to a certain extent. The first tier of Varner-gruppen's suppliers is required to inform Varner-gruppen of all subcontractors. The company uses the term "subcontractors" for its second tier of suppliers, which the company monitors to a limited capacity.

J. Lindeberg monitors subcontractors directly and indirectly through their suppliers and via the local expertise from their agent. Acne's main supplier is a large denim factory, which they regularly visit to make sure no subcontractors are used. Its other two denim suppliers are new and will be followed up in 2013. As Fair Wear Foundation views Italy to be a low-risk country, no CSR-audits are made by Acne's buyers and its product developers visit the washing houses regularly. Acne also says that their suppliers have no subcontractors. Tiger of Sweden, Lindex, Inditex as well as Nudie Jeans monitor all subcontractors. MQ monitors all washing units connected to their denim production in China and Bangladesh. In 2013, the company will follow-up on its supplier's washing unit in Thailand.

Gina Tricot has implemented more controls, and worked to increase knowledge of sandblasting. The company audits some subcontractors, but it has a wish to control further down in its supply chain. When this has been possible, various factors have made this possible such as "volume, openness with suppliers, risk and geographical closeness"<sup>42</sup>. KappAhl also monitors subcontractors to a certain extent. They focus on factories where they have the ability to "make a change"<sup>43</sup>. RNB Retail and Brands is focusing on monitoring those subcontractors that deal with denim production, which is a handful of units.

WeSC does not have any subcontractors in relation to their denim production. Whyred trusts their suppliers that no subcontracting is done for denim and visit its suppliers regularly. Åhléns does not follow up its subcontractors. Indiska audits subcontractors relevant for its production (workshops, dyeing units, printing units, CETPs<sup>44</sup> and home workers). Filippa K's sandblasting monitoring system is still under development and does not yet cover subcontractors.

NGOs and unions constitute valuable resources in the sandblasting ban monitoring process. In the next section we map to what extent the clothing companies use the opportunity to work with these actors.

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40 Ruggie, J. (2011). Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework. Annex. p. 6 [Internet], Available at: [http://ec.europa.eu/enterprise/policies/sustainable-business/files/business-human-rights/guiding\\_principles\\_business\\_and\\_hhrr\\_en.pdf](http://ec.europa.eu/enterprise/policies/sustainable-business/files/business-human-rights/guiding_principles_business_and_hhrr_en.pdf), (Last accessed: 2012-10-21).

41 Ibid. p. 16.

42 Mail conversation with Anna-Karin Wårfors, CSR Manager, Gina Tricot, 2012-09-14, 2012-10-22.

43 Mail conversation with Eva Kindgren, CSR Manager, KappAhl, 2012-10-24.

44 CETP means Central Effluent Treatment Plant.

## COOPERATING WITH NGOS AND UNIONS IN THE MONITORING PROCESS

Several clothing companies take part in multi-stakeholder initiatives where companies, unions, and NGOs cooperate. Acne, J. Lindeberg and Nudie Jeans work with local NGOs and unions through Fair Wear Foundation. One of the initiative's principles is to involve the different parties (companies, unions and NGOs) at every level of their work from the verification process in developing strategies. They also put emphasis on cooperating and engaging with local organisations in production countries. Filippa K, also a member of Fair Wear Foundation, did not answer this question, as their monitoring system of the sandblasting ban is under development.

Furthermore, the clothing companies provided various answers regarding their involvement in the business-led initiative, BSCI. RNB Retail and Brands mentions that they support BSCI's stakeholder discussion with NGOs and unions but it has not direct cooperation with local actors. Gina Tricot and Åhléns say that they work with NGOs and unions via BSCI. KappAhl, Lindex and MQ indicate they do not work with NGOs. H&M also mentioned their membership with Fair Labour Association (FLA)<sup>45</sup>, which uses independent organizations to audit member companies. In this context, H&M works indirectly with unions as FLA cooperates with local unions in its monitoring work.

In addition, both H&M and Inditex have signed ITGLWF's Global Campaign to Ban Sandblasting. By doing so, they have agreed to ban the practice of sandblasting throughout their supply chains, "including the use but not limited to the use of aluminum oxide, aluminum silicate, silicon carbide, copper slag and garnet for abrasive blasting"<sup>46</sup>. According to the ban, both companies are also required to work with their suppliers in a transition towards alternative methods, after having established the risks and their means of control as well as taking the necessary measures to ensure that the ban is effectively applied throughout their whole supply chain<sup>47</sup>.

Furthermore, in 2012, Inditex signed an extension of the ITGLWF's Global Framework Agreement. It means that Inditex shares detailed lists of suppliers and manufacturers with ITGLWF and that local trade unions participate in the monitoring of Inditex' suppliers. Another initiative that was mentioned by Inditex was Ethical Trading Initiative (ETI)<sup>48</sup>. It is a multi-stakeholder initiative based in Great Britain consisting of corporations, unions and NGOs. It functions as a forum for learning, defining and establishing "good practice" in ethical trade. Varner-gruppen is part of ETI's Norwegian equivalent, but says that they have collaborated with different organizations but not specifically on sandblasting. Finally, Indiska and WeSC answered that they do not cooperate with NGOs and unions on monitoring sandblasting. Whyred does not cooperate with NGOs and unions either, but say that their supplier in Turkey has an Ecoteks certificate<sup>49</sup>.

In the next part, we will see if the clothing companies verify through product tests that their products have not been sandblasted.

## DIFFICULT TO TEST DENIM PRODUCTS FOR SANDBLASTING

One way to go about testing for sandblasting is to use metal detectors. However, metal detectors fail to detect one type of local sand used for blasting that is small-grained, rich of silica and contains a low level of metal. Another type of sand, which also is commonly used, is large-grained alumina sand. It is often imported from China and is easier to test since it contains a higher level of metal but less silica. The lack of adequate testing techniques requires clothing companies to work closely with their suppliers to develop new more accurate methods and consistently use them as standard in their audits<sup>50</sup>.

Acne, Filippa K, H&M, Indiska, Lindex, RNB Retail and Brands, Varner-gruppen, WeSC and Åhléns do not perform any product tests in order to ensure that sandblasting is not used in production. For example, Åhléns and Whyred do not do this because they are sure that sandblasting is not used in the production of their jeans orders. Whyred says that its supplier, that sows and ships the garments, has the skills to determine what type

45 Fair Labour Association. (2012). [Internet] Available at: [www.fairlabor.org](http://www.fairlabor.org). (Last accessed: 2012-10-19).

46 ITGLWF Press release. (2011). "Industry Call to Action: Call for a Global Ban on Apparel Sandblasting" [Internet], Available at: <http://www.itglwf.org/en/Sandblastingglobalcalltoaction.html> (Last accessed: 2012-11-17).

47 ITGLWF, Global Campaign to Eliminate sandblasting, [Internet], Available at: <http://www.itglwf.org/lang/en/GlobalcampaigntoEliminateSandblasting.html>, (Last accessed: 2012-10-18).

48 Ethical Trade initiative. (2012). [Internet] Available at: [www.ethicaltrade.org](http://www.ethicaltrade.org). (Last accessed: 2012-10-19).

49 The certificate says that the supplier Whyred uses, does not use sandblasting at any time during washing/dyeing processes.

50 Clean Clothes Campaign. (2012). "Deadly Denim – Sandblasting in the Bangladesh Garment Industry", March, p. 22.

of technique that has been used in the production. KappAhl also performs product tests but did not indicate whether they tested specifically for sandblasting. Gina Tricot, Inditex and MQ are also working on finding a reliable test procedure for sandblasting. However, J. Lindeberg states that their local technicians have the ability to see the difference between sandblasted jeans and other techniques. Products by Tiger of Sweden are visually checked, at their supplier in Italy, at their main storage in Denmark and at their main office in Stockholm. The company also do random sampling. Nudie Jeans answered that their product agent visits laundries every day during production.

Regardless of whether it is possible to test for sandblasting, a transition to alternative methods is essential. Below we look at which alternative methods are used among the clothing companies and discuss their possible negative effects on the workers.

## THE RISE OF ALTERNATIVE METHODS

Complementing a “green” trend to use enzymes, fair trade cotton and different materials, alternatives to sandblasting are used and new ones are being developed<sup>51</sup>. This development can be viewed in light of international clothing companies banning the use of sandblasting in their supply chains<sup>52</sup>. Which alternative method buyers should endorse is a complicated matter as there is not enough research done on the safety and health risks. All methods vary in terms of results, costs and risks to occupational health and safety. This fact requires that the workers are aware of the risks and that they wear sufficient Personal Protective Equipment.<sup>53</sup>

One of the most common method is using *chemical treatments*, and particularly one chemical substance, potassium permanganate, which is sprayed on to the denim with a brush or a spray gun. The research is limited, but the method is highly irritant for both upper and lower respiratory tracts and can cause asthma and bronchitis effects. The chemical also leaves residue after the application. If severely exposed, the worker can become manganese poisoned<sup>54</sup>. A scientific study also established several negative effects of potassium permanganate, such as adverse reproductive effects and genetic material effects. Furthermore, the chemical can cause eye and skin irritation, nausea, vomiting and may affect respiration, cardiovascular system, liver, blood, urinary system, behavior/central nervous system. Repeated prolonged contact may also cause dermatitis<sup>55</sup>.

Those companies that said they used *chemical treatments* were Acne, Gina Tricot, H&M, Nudie Jeans, RNB Retail and Brands, Varner-gruppen and Whyred<sup>56</sup>. Lindex, Nudie Jeans, RNB Retail and Brands, Varner-gruppen say they specifically used *potassium permanganate*. Acne, KappAhl, MQ said that they use potassium permanganate spray. Lindex, Nudie Jeans, RNB Retail and Brands and Varner-gruppen also say that they use *hydrogen peroxide* and *sodium hypochlorite*. Hydrogen peroxide has strong oxidizing properties and is a powerful agent for bleaching but is less aggressive to the fibres and ecologically friendlier than other chemicals. Hydrogen peroxide is bleach that is cheap and very aggressive on the fibres as well as hazardous to the environment.<sup>57</sup>

Another popular method among the companies is *stone washing*. When using the method of stone washing, the denim is put in a cauldron together with pumice stones or volcanic rocks that creates a fading that is less uniform.<sup>58</sup> The recommendation is to use pumice stone in order to protect the workers. If perlite is used with hydrochloric acid, it could be dangerous to the upper and lower respiratory tracts<sup>59</sup>. However, as the worker is separated from the product, it is safer<sup>60</sup>. Out of 17 companies, 13 of them indicated the use of this method: Acne, Gina Tricot, H&M, J. Lindeberg<sup>61</sup>, KappAhl, Lindex, Nudie Jeans, RNB Retail and Brands, Tiger of Sweden, WeSC, Whyred, Varner-gruppen and Åhléns. Whyred said specifically that when stone washing, its Turkish supplier prefers the pumice stone.

When it comes to *washing*, Acne, WeSC, RNB Retail and Brands and Åhléns said specifically that they used

51 Interview with Chris Koeleman, Consultant/Lecturer Textiles and Quality, Amsterdam Fashion Institute, 2012-10-19.

52 Clean Clothes Campaign. (2012). “Deadly Denim – Sandblasting in the Bangladesh Garment Industry”, March, p. 21.

53 Interview with Naseriz Yesim Yasin, Public Health Expert, Turkish Solidarity Committee of Sandblasting Labourers, 2012-11-16.

54 Prof. Dr. Kilicaslan, Senior Health Expert, Turkish Solidarity Committee of Sandblasting Labourers, e-mail, March 2010.

55 Material Safety Data Sheet Potassium Permanganate Solution MSDS, [Internet] Available at: <http://www.sciencelab.com/msds.php?msdsId=9926744> (Last accessed: 2012-12-09).

56 Whyred may have used other alternative methods as well.

57 Information provided by Alexandra Deraeve, Head of Department of Fashion, Textile and Wood Technology, University College Ghent, 2012-11-13.

58 Prof. Dr. Kilicaslan, Senior Health Expert, Turkish Solidarity Committee of Sandblasting Labourers, e-mail, March 2010.

59 Ibid.

60 Interview with Naseriz Yesim Yasin, Public Health Expert, Turkish Solidarity Committee of Sandblasting Labourers, 2012-11-16.

61 J. Lindeberg’s techniques vary, but stone washing and scraping are mostly used.

some sort of washing. Acne, H&M, Nudie Jeans WeSC and Åhléns also use *ozone water free washing*. The bleaching of garment is then done in a washing machine with ozone gas in closed chamber<sup>62</sup>. As the equipment is a washing machine, the workers are protected against exposure<sup>63</sup>. Indiska, KappAhl, WeSC, RNB Retail and Brands also said they used enzymes when washing (bio washing). Furthermore, Indiska and Åhléns also use *pigment dyes* in combination with *enzyme wash* to create the right look. When using pigment dye, the synthetic pigments get seated with the help of binders<sup>64</sup>. Åhléns also uses pigments and enzyme wash.

It is also common to use various kinds of *hand work (scraping, brushing, sanding)*. Out of the 17 companies, 13 used *scraping*: Acne, Filippa K, H&M, KappAhl, Lindex, J. Lindeberg, MQ, Nudie Jeans, RNB Retail and Brands, Tiger of Sweden, WeSC, Gina Tricot and Varner-gruppen.

When *brushing*, machines manually or automatically degrade the fabric.<sup>65</sup> The dust coming from the brush or sandpaper can cause occupational asthma. As the dust coming from the brushing consists of bigger particles, it will not easily enter the respiratory system<sup>66</sup>. Out of 17 companies, 11 also used *brushing* as a method: Acne, Gina Tricot, H&M, KappAhl, Lindex, Nudie Jeans, RNB Retail and Brands, Tiger of Sweden, Varner-gruppen, WeSC and Åhléns.

When using the method of *sanding*, workers mechanically rub the sandpaper on the fabric. It is labour intensive and requires skilled workers. Due to the exposure of dust, the process can cause occupational asthma.<sup>67</sup> Six companies use *sanding*: Acne, Gina Tricot, H&M, RNB Retail and Brands, Varner-gruppen and WeSC.

When using lasering, a laser machine is used to lighten the fabric. The lasering is very versatile and is getting more and more common<sup>68</sup>. If protective eyewear is not worn, it could expose the worker to health hazards<sup>69</sup>. However, the method is the least dangerous if protection is worn<sup>70</sup>. The downside is that the equipment is expensive, and can cost up to 250 000 dollars<sup>71</sup>. Out of 17 companies, eight use lasering (Acne, Filippa K, Gina Tricot, H&M, Lindex, Nudie Jeans, Tiger of Sweden and Varner-gruppen).

Inditex did not state at all which alternative methods its suppliers use.

Table 3. The use of alternative methods

ALTERNATIVE METHOD USED	NAME OF COMPANY
Chemical treatments <sup>72</sup>	Acne, Gina Tricot, H&M, Nudie Jeans, RNB Retail and Brands, Varner-gruppen, Whyred.
Potassium permanganate or PP spray	Lindex, Nudie Jeans, Acne, KappAhl, MQ, RNB Retail and Brands, Varner-gruppen.
hydrogen peroxide	Lindex, Nudie Jeans, Varner-gruppen, RNB Retail and Brands.
sodium hypochlorite	Lindex, Nudie Jeans, Varner-gruppen, RNB Retail and Brands.
Stone washing	Acne, Gina Tricot, H&M, J. Lindeberg, KappAhl, Lindex, Nudie Jeans, RNB, Retail and Brands, Tiger of Sweden, WeSC, Whyred, Varner-gruppen, Åhléns.
Washing	Acne, WeSC, RNB Retail and Brands, Åhléns.
Ozone water free washing	Acne, H&M, Nudie Jeans, WeSC, Åhléns.
Enzyme washing	Indiska, KappAhl, WeSC, RNB Retail and Brands, Åhléns.
Pigments and enzyme washing	Indiska, Åhléns.
Pigments	Åhléns.
Hand work (scraping, brushing, sanding)	
Scraping	Acne, Filippa K, H&M, KappAhl, Lindex, J. Lindeberg, MQ, Nudie Jeans, RNB Retail and Brands, Tiger of Sweden, WeSC, Gina Tricot, Varner-gruppen.
Brushing	Acne, Gina Tricot, H&M, KappAhl, Lindex, Nudie Jeans, RNB Retail and Brands, Tiger of Sweden, Varner-gruppen, WeSC, Åhléns.

62 Express Textile. (2003). Denim garment processing: The eco-friendly way. [Internet] Available at: <http://www.expresstextile.com/20030320/dyes2.shtml> (Last accessed: 2012-10-19).

63 Interview with Chris Koeleman, Consultant/Lecturer Textiles and Quality at Amsterdam Fashion Institute, 2012-10-19.

64 Mail conversation with Renée Andersson, CSR Manager, Indiska, 2012-09-17.

65 Prof. Dr. Kilicaslan, Senior Health Expert, Turkish Solidarity Committee of Sandblasting Labourers, e-mail, March 2010.

66 Ibid.

67 Ibid.

68 Interview with Chris Koeleman, Consultant/Lecturer Textiles and Quality at Amsterdam Fashion Institute, 2012-10-19.

69 Riddselius, C. (2010). "Fashion Victims – A report on sandblasted denim", Fair Trade Center, p. 10.

70 Prof. Dr. Kilicaslan, Senior Health Expert, Turkish Solidarity Committee of Sandblasting Labourers, e-mail, March 2010.

71 Interview with Nesperiz Yesim Yasin, Public Health Expert, Turkish Solidarity Committee of Sandblasting Labourers, 2012-11-16.

72 Some companies specified exactly the names of the chemicals used, others did not.

ALTERNATIVE METHOD USED	NAME OF COMPANY
Sanding	Acne, Gina Tricot, H&M, RNB Retail and Brands, Varner-gruppen, WeSC.
Lasering	Acne, Filippa K, Gina Tricot, H&M, Lindex, Nudie Jeans, Tiger of Sweden, Varner-gruppen.

In the next part, we study how the clothing companies perform health and safety trainings for management and workers of their suppliers.

## HEALTH AND SAFETY TRAININGS AND THE USE OF THE PERSONAL PROTECTIVE EQUIPMENT

Istanbul Textile and Apparel Exporter Association (ITKIB) argues that sandblasting is not hazardous to workers' health if the right Personal Protective Equipment is worn. However, in high-risk countries like Bangladesh it has been confirmed by the Clean Clothes Campaign that the health and safety procedures are not always followed<sup>75</sup>. This highlights even more the need for workers to use the right Personal Protective Equipment, such as facemasks, goggles, earplugs as well as protective clothing, even when using alternative methods. But this kind of protection is expensive and requires an investment by the factory. Additionally, the employer needs to provide the workers with adequate education on how to use the protection gear and why it is important to use it. According to Chris Koeleman, one reason why workers are not wearing their protective clothing can be because of climate circumstances. For example, in Bangladesh the facilities can reach high temperatures, "so they will never be able wear it under these conditions"<sup>76</sup>.

Although Filippa K, WeSC do not provide training at the moment, almost all clothing companies confirm that either they themselves or the factories train the employees in health and safety issues. According to Gina Tricot, BSCI has given training sessions on sandblasting and health and safety issues. Lindex also mentions training for management done by BSCI. The company makes sure that their suppliers train their workers. Furthermore, Lindex also arranges their own workshops and involve factories and workers in environmental and social projects. Tiger of Sweden asserts that the knowledge is very high in Italy, where its denim products are washed. The company also supports BSCI's global work on Occupational Health and Safety training.

Åhléns organizes direct suppliers and factory training and indirectly through BSCI capacity building activities. Target groups are factory management and relevant workers. KappAhl also provides training for "concerned people" and RNB Retail and Brands educates supplier management, but require them to offer training to their workers and the employees of their sub suppliers. MQ runs a training program in China with the factory management of 10 suppliers. The next part of the program will focus on training the factory management on how to train their workers. Inditex requires external manufacturers, suppliers and subcontractors to provide training for their workers. Acne's three suppliers of washed denim confirm that they train all their employees.

Furthermore, the management and employees of Indiska's suppliers are mostly trained in health and safety issues internally by their suppliers or by external consultants that are hired by the suppliers themselves or by bigger brands. H&M is the only company that previously trained workers in sandblasting, in Bangladesh. With regards to other countries, health and safety training is incorporated in chemical handling training. Nudie Jeans uses internal staff/consultants to train their suppliers' workers mostly. Varner-gruppen says that it requires suppliers to have a functioning health and safety programme for workers, new and existent. Furthermore, Ethical Trading Initiative (ETI) in Norway also performs a general CSR training for factory management, where a number of Varner-gruppen's suppliers have attended. Also, Whyred sends an internal document to their suppliers requiring them to have a functioning health and safety program. Finally, J. Lindeberg is just about to launch a training program together with Fair Wear Foundation to train both managers and workers.

Below, we find out if the clothing companies have worked to create better living conditions for former sandblasting workers.

<sup>73</sup> Hand craping with sandpaper.

<sup>74</sup> Ibid.

<sup>75</sup> Clean Clothes Campaign. (2012). "Deadly Denim – Sandblasting in the Bangladesh Garment Industry", March, p. 27.

<sup>76</sup> Interview with Chris Koeleman, Consultant/Lecturer Textiles and Quality at Amsterdam Fashion Institute, 2012-10-19.

## REMEDYING FORMER DENIM SANDBLASTING WORKERS

In November 2010, Fair Trade Center stated in connection with the publication of “Fashion Victims” that although it was positive that several clothing companies were phasing out their production of sandblasted jeans, they should take their responsibility and adequately compensate those workers whose health has been negatively affected by using the method<sup>77</sup>. This recommendation is also supported by UN Guiding Principles on Human Rights and Business (2011) and its third pillar, which concerns “the need for rights and obligations to be matched to appropriate and effective remedies when breached”<sup>78</sup>. The clothing companies do have a responsibility, not only to investigate how sandblasting has affected the workers, but also to ensure that remedies are paid such as adequate financial means to compensate for loss of income and hospital bills.

Up to date, little has been done by governments and international buyers to ensure that former sandblasting workers receive compensation, especially those working in the informal sector. One exception is Turkey that in 2011 passed a new disability pension law that applies to all workers regardless of if they have worked in the formal or informal sector<sup>79</sup>.

None of the companies in this study have actively worked to create better living conditions for former sandblasting workers. Varner-gruppen mapped the situation of the former sandblasting workers, and concluded



*Credit: Clean Clothes Campaign, Germany*

workers’ health and job situation was not a concern in the factories that they used. According to Nudie Jeans, many of the workers in Italy “lost their jobs with sandblasting but most of them were able to work with other tasks, for example manual treatment and finishing”<sup>80</sup>. Nudie Jeans as well as Tiger of Sweden are not aware of any problems related to former sandblasting workers in Italy and have therefore not taken any action. Åhléns stated that they do not think that this question is relevant as they do not buy worn-out denim. Inditex says that they have communicated to their suppliers, their concerns about health and safety and the implications for workers using sandblasting.

This is a photo of Abdulhalim Demir, a former sandblasting worker in Turkey, who got infected with silicosis. “Only later I learned about my rights as a worker, but we had been cheated. All the paper work around social security insurance had been tampered with, fake bookkeeping, etc. Even though I had a contract and paid social security contributions, I have now had a struggle for three years already to proof to them that I worked all this time as a sandblaster and that my health problems come from my work” says Abdulhalim Demir<sup>81</sup>.

Before we summarize findings and discuss further, we will cover the clothing companies’ work to communicate the issue of sandblasting on their websites.

## DETAILED INFORMATION ON CLOTHING COMPANIES’ POSITION ON SANDBLASTING IS LACKING

In order for consumers and other stakeholders to stay correctly informed of clothing companies’ work on issues related to sandblasting, companies need to communicate this on their websites. Overall, several companies communicate their position on sandblasting (Acne, Gina Tricot, MQ, H&M, Inditex, KappAhl, Lindex, Nudie Jeans, Varner-gruppen, RNB Retail and Brands, Åhléns). H&M and Inditex take this one step further by disclosing information on audits, and H&M also describes its auditing questions on sandblasting.

77 Fair Trade Center. (2010). “Låg kunskap och senfärdigt agerande från klädföretag mot farlig arbetsmetod”. [Internet] Available at: <http://www.fairtrade-center.se/l-g-kunskap-och-senf-rdigt-agerande-fr-n-kl-df-retag-mot-farlig-arbetsmetod>. (Last accessed: 2012-10-18).

78 Ruggie, J. (2011). Guiding Principles on Business and Human Rights: Implementing the United Nations “Protect, Respect and Remedy” Framework. Annex. p. 6 [Internet], Available at: [http://ec.europa.eu/enterprise/policies/sustainable-business/files/business-human-rights/guiding\\_principles\\_business\\_and\\_hhrr\\_en.pdf](http://ec.europa.eu/enterprise/policies/sustainable-business/files/business-human-rights/guiding_principles_business_and_hhrr_en.pdf), (Last accessed: 2012-10-21).

79 Interview with Naseriz Yesim Yasin, Public Health Expert, Turkish Solidarity Committee of Sandblasting Labourers, 2012-11-16.

80 Mail conversation with Sandya Lang, CSR Manager, Nudie Jeans, 2012-10-01.

81 Clean Clothes Campaign, Germany. Interview with Demir, Abdulhalim.

However, on the websites of Filippa K, Indiska, J. Lindeberg, Whyred, WeSC and Tiger of Sweden information on sandblasting was absent. Information on sandblasting was found on the website of IC Companys which Tiger of Sweden is part of.

Table 4. Clothing companies information on sandblasting on their websites

NAME OF COMPANY	INFORMATION ON SANDBLASTING ON WEBSITE
Acne	Yes.
Filippa K	No.
Gina Tricot	Yes.
H&M	Yes.
Indiska	No.
Inditex	Yes.
J. Lindeberg	No.
KappAhl	Yes.
Lindex	Yes.
MQ	Yes.
Nudie Jeans	Yes.
RNB Retail and Brands	Yes.
Tiger of Sweden	No.
Varner-gruppen	Yes.
WeSC	No.
Whyred	No.
Åhléns	Yes.

## SUMMARY & DISCUSSION

This study is a follow-up of Fair Trade Center’s “Fashion Victims – A report on sandblasted denim”, published in 2010. The deadly method used to produce popular worn-out denim has resulted in 55 deaths in Turkey because sandblasting workers have contracted silicosis. Since the Turkish Government banned the practice in 2009, the method was exported to other unregulated countries such as Bangladesh, China, Pakistan and Egypt. Until recently, little was known about the sandblasting situation in these countries. Research by the Clean Clothes Campaign in Bangladesh confirms a similar and perhaps worse situation compared with that in Turkey. Yet, there are still no certain estimates of how many sandblasting workers have been infected with silicosis<sup>82</sup>.

Fair Trade Center’s follow-up study highlighted some of the achievements of the clothing companies’ work with banning sandblasting from their supply chains. It aimed to describe the current challenges of ensuring effective follow-up of a sandblasting ban, as well as the clothing companies’ use of alternative methods to sandblasting. 17 of the biggest clothing companies on the Swedish market were included in this study: Acne, Filippa K, Gina Tricot, H&M, Indiska, Inditex (Zara, Massimo Dutti), J. Lindeberg, KappAhl, Lindex, MQ, Nudie Jeans, RNB Retail and Brands (Polarn & Pyret, Brothers, Sisters, JC), Tiger of Sweden, Varner-gruppen (Cubus, Dressmann, BikBok, Carlings, Solo), Whyred, WeSC and Åhléns.

Today, all of the studied clothing companies’ awareness of the deadly dangers of the use of sandblasting has increased. All companies except Indiska have now banned sandblasting from their supply chains. It is an impressive amount of companies, which shows a will of the clothing companies to end workers’ suffering. That said, there are numerous pertinent issues left to deal with. For example, there is a great variation in the application of the companies’ policies. Some of the companies in the study have sandblasting policies which apply for both their own products and those of their suppliers. But others have policies only for their own denim garments: Nudie Jeans, Varner-gruppen, RNB Retail and Brands, Lindex, MQ, Tiger of Sweden, KappAhl and WeSC. This means that sandblasting in practice could take place for other brands. We also recommend Indiska to introduce a policy on sandblasting even though the company has never been using the method.

There are also a few companies, such as H&M, Gina Tricot, Åhléns, J. Lindeberg, Filippa K, and Whyred whose policies apply to the total production units of their suppliers or do not allow suppliers to have sandblasting capacities at all. Acne’s supplier in Turkey has no capacity to sandblast, but in Italy, some washing houses can

<sup>82</sup> Interview with Naseriz Yesim Yasin, Public Health Expert, Turkish Solidarity Committee of Sandblasting Labourers, 2012-12-10.



sandblast in accordance with Italian legislation. There were also four other companies that currently use suppliers with sandblasting capacities (Tiger of Sweden, Varner-gruppen, MQ and RNB Retail and Brands). These companies need to influence their suppliers to dismantle that equipment immediately, and ensure that they can make the transition to alternative methods. If a company is too small to influence the supplier in that way, it could offer capacity building activities or work with other actors.

Still, it may be difficult to be 100 percent sure that sandblasting is not used in the whole supply chain. Even though direct suppliers lack sandblasting equipment there is no guarantee that subcontractors will adhere to policies, especially further down the supply chain. This study reveals several challenges when it comes to monitoring sandblasting bans in the companies' supply chains, which concerned lack of suppliers' adherence to policies and the fact that the clothing companies cannot monitor their suppliers and subcontractors all the time. Suppliers sometimes also give inaccurate information to buyers, and that clearly hampers the clothing companies' control over them. In addition, the issues described above resemble the general follow-up predicaments that clothing companies with global supply chains face.

Positively, almost all clothing companies indicate that they monitor their suppliers and many also check for sandblasting. Even if this does not say anything about the results of the monitoring it is still a first step. However, few companies follow up on all their subcontractors. Some of the subcontractors can even be unauthorized, so that there is a risk that sandblasting could be performed by them. This means that the foundation for the clothing companies' relationship with their suppliers needs to be built on trust and long-term commitment and clear communication. Furthermore, how the monitoring situation looks on the ground can vary from country to country. For example, Bangladesh was highlighted in the study to be a country with many risks and challenges, while since Turkey banned sandblasting; it has lowered the possibility of sandblasting taking place to a large degree. Regardless of the amount of risks and challenges in a specific country, the clothing companies need to work on creating better monitoring systems and purchasing practises.

The report also studied ways in which the companies can work preventively, by adjusting the design and prolonging lead times. In general, most clothing companies do not adjust their designs, but rather use alternative methods in order to achieve a "worn-out look" or a certain "finishing". When it came to lead times, the majority of the companies claim that they do adjust them in order not to hurry the production of denim.

Few of the clothing companies worked directly with NGOs and unions in the monitoring process. By working directly with local NGOs and unions clothing companies could become more aware of how the workers' situation is on the ground. The study revealed that the cooperation with NGOs and unions usually takes place under the auspices of another organisation such as Fair Wear Foundation or BSCI. When it comes to BSCI, it should be stated more clearly how it cooperates with its member companies in monitoring process. With that said, being part of these above mentioned initiatives, including Fair Labour Association and Ethical Trade Initiative could serve as useful actors to cooperate with on the issue of sandblasting. Furthermore, The General Framework agreement that Inditex has signed with ITGLWF provides for one opportunity to cooperate with unions in their work to ensure implementation of a ban. By also signing ITGLWF's ban on sandblasting, Inditex and H&M show a will to work on ensuring good cooperation with the unions on this issue.

Furthermore, Gina Tricot, Inditex and MQ argue that they have not found a reliable sandblasting test procedure. However, J. Lindeberg and Whyred say their technicians have the ability to determine if the denim has been sandblasted. Acne, Filippa K, H&M, Indiska, Lindex and RNB Retail and Brands, Varner-gruppen, WeSC and Åhléns do not perform any product tests at all in order to ensure that sandblasting is not used in production. Clearly, this confusion in the industry requires more technical research. The negative implication of this predicament is that it remains difficult for the consumer to know if the denim has been sandblasted or not.

With sandblasting being banned from production, clothing companies' use of alternative methods has flourished. The most popular methods are chemical treatments, handwork of various kinds (brushing, scraping, sanding), stone washing and lasering. Although they may be less dangerous than sandblasting, they carry additional negative effects on their own. For example the use of chemical treatments such as potassium permanganate can cause asthma and bronchitis effects and may cause adverse reproductive effects and genetic material (mutagenetic) effects. Clothing companies need to be aware of these negative aspects, and ensure that their suppliers' employees use personal protective equipment. The fact that Inditex refrained from disclosing any information regarding the possible use of alternative methods, shows a sign of lack of transparency on its part. Positively, the study showed that a majority of the clothing companies work with ensuring that their suppliers

receive proper training. Working with alternative methods also necessitates good internal communication between CSR, design and purchasing departments. The denim should be designed so that the methods needed to achieve this are not dangerous to the workers.

Dissappointingly, none of the companies in this study have actively worked to create better living conditions for former sandblasting workers. While some companies such as Varner-gruppen, Nudie Jeans and Tiger of Sweden researched the situation in one way or another, the rest of the companies (Acne, Gina Tricot, H&M, Inditex, KappAhl, Lindex, MQ, and Whyred) that previously used sandblasting in their supply chains, have done nothing to ensure adequate compensation for former sandblasting workers and their families. This is not in line with the UN Guiding Principles on Business and Human Rights, which highlights the importance of remedying those people that have had their Human Rights violated.

Not all clothing companies adequately communicate their work on sandblasting either (Filippa K, Indiska, J. Lindeberg, Whyred, WeSC, and Tiger of Sweden). As for those companies that previously used sandblasting, they need to publish detailed information on how they ensure that their sandblasting monitoring process is sufficient. Clothing companies that do not disclose their position on sandblasting and their measures to ensure an effective ban, risk to lose their competitive advantage against companies that do so.

To conclude, by introducing a sandblasting ban, clothing companies have taken important first steps to eliminate sandblasting in their supply chains. But how can the clothing companies be completely sure that suppliers and their subcontractors do not sandblast? The monitoring context in different denim producing countries will also vary, but this is no reason to stop improving monitoring systems and purchasing practices. Central to the monitoring work is direct cooperation with local actors such as NGOs and unions. Furthermore, it is important to work preventively and work with designs and lead times that facilitate a better working environment for the workers in the denim factories. By using alternative methods, the danger of contracting silicosis is diminished, but the alternative methods carry their own risks. Hence, it is important to ensure that the workers are trained in health and security issues. As for sandblasting test procedures, the industry needs to cooperate and follow the research in the area to end the confusion about how to make sure that the denim has not been sandblasted. Furthermore by being transparent and disclosing in more detail how the clothing companies work to eliminate sandblasting in practice, the consumers will be better equipped to make informed buying decisions. Last but not least, by compensating former sandblasting workers for the stress that sandblasting has caused them and their families, clothing company show that they are willing to take responsibility for the misfortunes caused by the ill-fated practice.

## RECOMMENDATIONS TO COMPANIES

**IMPROVE** monitoring systems and create better purchasing practices.

**BUILD** long-term relationships with suppliers by communicating clearly and showing transparency.

**COOPERATE** directly with NGOs and trade unions in production countries in monitoring the sandblasting ban.

**ENSURE** good internal communication about the risks of sandblasting and other alternative methods between the CSR, design and purchasing departments as well as suppliers.

**CONTINUE** to support a ban on sandblasting in supply chains, and support suppliers that wish to phase out their sandblasting.

**MONITOR** new research on alternative methods and work to improve supplier trainings in health and safety issues.

**INVESTIGATE** at which of the clothing company's production sites workers may have contracted silicosis or may have been put at risk. If this is the case, the clothing company needs to make sure that adequate compensation is provided for the workers and their families, as well as the necessary financial support for medical treatments.

**PROMOTE** a European Union import ban and national sandblasting bans in production countries.

**PUBLICIZE** detailed information on your stance and work on banning sandblasting in your supply chain.

## RECOMMENDATIONS TO GOVERNMENTS IN DENIM PRODUCING COUNTRIES

**BAN** the use of manual and mechanical sandblasting.

**ENFORCE** rules on occupational health and safety.

**ENSURE** that silicosis affected workers receive support e.g. social and medical assistance and disability pensions, regardless of whether they worked in the formal or informal sector.

## RECOMMENDATIONS TO CONSUMERS

**ASK** the salesperson in your denim store how the denim has been produced.

**FIND** out what the clothing companies to monitor their sandblasting bans.

**AVOID** purchasing jeans that already have a "worn-out" look.

**USE** your old jeans longer.

# REFERENCES

## SURVEY RESPONDENTS, CLOTHING COMPANIES

Andersson, Renée, CSR Manager, Indiska  
Falkenek, Anita, Sustainability Manager, Åhléns  
Gonzalez Busquets, Aleix, Senior CSR and Supply Chain Manager, Inditex  
Görander, Johanna, Head of Assortment, Whyred  
Håkans, Per, Marketing Manager, Tiger of Sweden  
Häggström, Emma, CSR Manager and Quality Manager, Acne  
Josephson, Rickard, VP, Director of Production & CSR, WeSC  
Kindgren, Eva, CSR Manager, KappAhl  
Lang, Sandya, CSR Manager, Nudie Jeans  
Larsson Elin, Corporate Responsibility Manager, Filippa K  
Lefébure, Annabelle Ingeborg, CSR Manager, Varner-gruppen  
Lorentzon, Maritha, CSR Product Manager, H&M  
Persson, Hannah, Social Compliance Coordinator, MQ  
Porss, Ingrid, CSR Manager, Lindex  
Sandberg, Camilla, CSR Manager, RNB Retail and Brands  
Sellberg, Ylva, Sustainability Coordinator, J. Lindeberg  
Wärfors, Anna Karin, CSR Manager, Gina Tricot

## OTHER INTERVIEWS

Deaave, Alexandra, Head of Department of Fashion, Textile and Wood Technology, University College Ghent, 2012-11-13.  
Koeleman, Chris, Consultant/Lecturer Textiles and Quality, Amsterdam Fashion Institute, 2012-10-19.  
Meurs, Annabel, International Verification Coordinator, Fair Wear Foundation, 2012-11-10, 12-12-04  
Neseriz Yesim Yasin, Public Health Expert, Turkish Solidarity Committee of Sandblasting Labourers, 2012-11-16.  
Prof. Dr. Kilicaslan, Senior Health Expert, Turkish Solidarity Committee of Sandblasting Labourers, e-mail, March 2010.

## OTHER SOURCES

Acona. (2004). "Buying your way into trouble – the challenge of responsible supply chain management". Insight Investment Management Limited, pp. 2-38.

Berge, Annika. (2011). "Hur reko är dina jeans?". Råd & Rön, 2011-08-23, [Internet] <http://www.radron.se/granskningar/Hur-reko-ar-dina-jeans/> (Last accessed: 2012-11-08).

Cappiccio, Silvana. (2009). "Jeans, the human cost of a fashion icon". HesaMag #1, autumn-winter.

Clean Clothes Campaign. (2012). "Deadly Denim – Sandblasting in the Bangladesh Garment Industry".

Clean Clothes Campaign, Germany. Interview with Demir, Abdulhalim.

Ethical Trade initiative. (2012). [Internet] Available at: [www.ethicaltrade.org](http://www.ethicaltrade.org). (Last accessed: 2012-10-19).

Express Textile. (2003). Denim garment processing: The eco-friendly way. [Internet] Available at: <http://www.expresstextile.com/20030320/dyes2.shtml> (Last accessed: 2012-10-19).

Fair Labour Association. (2012). [Internet] Available at: [www.fairlabor.org](http://www.fairlabor.org). (Last accessed: 2012-10-19).

Fair Trade Center, (2010). "Låg kunskap och senfärdigt agerande från klädföretag mot farlig arbetsmetod". [Internet] Available at: <http://www.fairtradecenter.se/l-g-kunskap-och-senf-rdigt-agerande-fr-n-kl-df-retag-mot-farlig-arbetsmetod>. (Last accessed: 2012-10-18).

Greenberg, Michael I, MD, MPH, Waksman, Javier, MD, and Curtis, John (2007). Silicosis: A Review, MD, [Internet] Available at: [http://www.sertox.com.ar/img/silicosis\\_article.pdf](http://www.sertox.com.ar/img/silicosis_article.pdf), pp. 394-412.

H&M Press release (2010). “H&M acquires remaining shares in Fabric Skandinavien” [Internet] Available at: <http://about.hm.com/content/hm/NewsroomSection/en/NewsRoom/NewsroomDetails/527476.html> (Last accessed: 2012-10-18).

H&M Policy on Sandblasting, August 2012 revised. (internal document).

ITGLWF Press release. (2011). “Industry Call to Action: Call for a Global Ban on Apparel Sandblasting” [Internet], Available at: <http://www.itglwf.org/lang/en/Sandblastingglobalcalltoaction.html> (Last accessed: 2012-11-17).

ITGLWF. (2012). “Global Campaign to Eliminate sandblasting”, [Internet], Available at: <http://www.itglwf.org/lang/en/GlobalcampaigntoEliminateSandblasting.html>, (Last accessed: 2012-10-18).

Material Safety Data Sheet Potassium Permanganate Solution MSDS, [Internet] Available at: <http://www.sciencelab.com/msds.php?msdsId=9926744> (Last accessed: 2012-12-09).

Riddselius, C. (2010). “Fashion Victims – A report on sandblasted denim”, Fair Trade Center

Ruggie, J. (2011). Guiding Principles on Business and Human Rights: Implementing the United Nations “Protect, Respect and Remedy” Framework. Annex. p. 6 [Internet], Available at: [http://ec.europa.eu/enterprise/policies/sustainable-business/files/business-human-rights/guiding\\_principles\\_business\\_and\\_hhrr\\_en.pdf](http://ec.europa.eu/enterprise/policies/sustainable-business/files/business-human-rights/guiding_principles_business_and_hhrr_en.pdf). (Last accessed: 2012-10-21).