

Standards – A Thai Case Study

- Well written *mandatory industrial* standards can eliminate the use of asbestos in specific products on a country by country basis.
- Entities specifying non-asbestos products by *voluntary* industrial standard can prevent the use of asbestos on a project by project or purchase by purchase basis.



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Standards for Exports

- Products for Export don't need to meet the standards of the country they're made in – they need to meet the standards of the country they will be sold in. Except, perhaps, for less developed countries (like Haiti) which don't have their own standards – yet.
- We'll look at just domestic Thai standards.

Products with Asbestos

- Automotive Parts
Brake pads, clutches, hood liners, gaskets and valves.
 - Construction Products
Flooring, ceiling and roofing tiles are commonly made with asbestos.
 - Textiles
Asbestos is used in the production of cloths and garments for its resistance to heat and corrosive elements. Some of the most common textiles include blankets, fireman suits and rope.
- * (2014) Asbestos Products & Materials - Overview of Products Containing Asbestos. Retrieved 19 November 2014, from www.asbestos.com/products/
- Most (perhaps all) of these products have standards.

Industrial Standards

- Industrial Standards are documents that specify characteristics of products and how they are to be tested to see if they meet the characteristics.
- Characteristics can be size (dimensions), strength(s), absorptivity, lumenosity, endurance, etc.
- In Thailand, Industrial Standards are issued by the Thai Industrial Standards Institute (TISI) which is under the Ministry of Industry.



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TIS. 370-2009

General (Voluntary) Industrial Standard Symbol



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Mandatory Standard Symbol

How industrial standards affect the use of non-asbestos products.

- Some industrial safety standards are *mandatory*. For example, all automotive windshield glass in Thailand must meet a safety standard.
- Some standards are *voluntary*. Asbestos or non-asbestos building material products can meet voluntary standards. They have no mandatory standards. It is allowable to make and sell products that don't meet any standard.

Thai Industrial Standards (TIS) having to do with Asbestos

TIS having to do with Asbestos				TIS for Non-Asbestos Substitute
No.	No. - Year	Product	No. - Year	Product
Roofing Material				
1	TIS12-2530	Flat Sheets	TIS1427-2540	Fibre Cement Flat Sheets
2	TIS18-2529	Corrugated Roof Panels	-	-
3	TIS79-2529	Dual Wave Roof Panels	TIS1407-2540	Fibre Cement Dual Wave Tiles
Brake Linings and Clutch Discs				
1	TIS97-2536	Brake Linings for Cars & Trucks	In process of being revised: allows asbestos.	
2	TIS212-2520	Clutch Discs for Cars & Trucks	In process of being revised: forbids asbestos.	
Pipe				
1	TIS81-2548	Pressure Resistant	TIS17-2532	Hard PVC - for drinking water
2	TIS126-2548	Pressure Resistant Connector	TIS276-2532	Steel
			TIS277-2532	Galvanized Steel
			TIS427-2531	Welded steel for Drinking Water
			TIS910-2532	Polybutylene for Drinking Water
			TIS982-2533	High Density Polyethylene for drinking Water
			TIS006-2533	Stainless Steel
			TIS1012-2533	Reinforced Concrete for Pressure
3	TIS125-2529	internal drainage connector	TIS128-2549	Reinforced Concrete for Drainage
4	TIS621-2529	internal drainage	TIS224-2533	Nonreinforced Concrete for Drainage
5	TIS622-2529	general drainage	TIS533-2530	Steel Pipe for Dirty Water and Ventilation

How Voluntary Industrial Standards Can Affect the Use of Non-asbestos Products.

- Organizations (government and non-government) can specify non-asbestos or asbestos products through the use of standards
- Some org's don't want to use asbestos because it would look bad to their stake holders and because they genuinely care about the welfare of people.



TIS. 370-2009

How Voluntary Industrial Standards Can Affect the Use of Non-asbestos Products.

- The drawings for a government health center can specify materials (e.g., dual wave asbestos cement roof panels – TIS79-2529). The TIS stands for Thai Industrial Standards. TIS1407-2540 is the standard for non-asbestos dual-wave roof panels. The plans could specify non-asbestos just as easily.
- In order for an organization to specify that a material must meet a non-asbestos standard, the standard has to exist. NICs (Newly Industrialized Countries like Thailand) are happy to write standards if they are requested to. LDCs (Less Developed Countries like Haiti) don't have their own standards; donor organizations usually specify standards from their own countries.

Local Construction Standards

- In Thailand there are no national construction standards. These are covered by the civil works department of each local government unit (Municipalities and Local Tambon Authorities). These local construction laws cover such things as the minimum strength of piles used for foundations. They do not cover materials. The laws are very similar from place to place.
- Another government entity that has some affect on construction is the City and Regional Planning Department. But their regulations don't affect building materials. The National Housing Authority has no regulations that affect the use of building materials. The NHA does affect specifications for government housing projects.
- Currently, standards for building materials are contained in industrial standards.

Motor Vehicle Standards

- Many government agencies have standards (or regulations). Besides the Ministry of Industry, the Department of Land Transportation also has standards that affect the use of asbestos. In fact, there are both Thai Industrial Standards (TIS) and Department of Land Transportation (DLT) Vehicle Specifications that affect the same product – **brake shoes**.

Clutch discs and Brake Linings

- Clutch discs are regulated by TIS 97-2536 which is being revised. The new standard will not allow asbestos.
- Neither clutch nor brake lining industrial standards are mandatory. Manufacturers are free to make and sell clutch discs which contain asbestos but do not meet these standards.

The DLT regulation issued in 2011 on brake performance

- Says that *new* car and truck brake linings must be nonasbestos. This is a mandatory regulation for vehicle manufacturers and importers.
- This does not apply to used cars.
- This does not apply to motorcycles.
- Replacement brake linings are regulated by TIS 97-2536 which has just been revised and allows for asbestos.

Standards as Part of Strategy – Things we Can Do

- Write letters requesting standards (or revisions to standards) for products which require (or have) *mandatory* safety standards; require no asbestos.
- Write letters requesting standards (or revisions to standards) for products which require (or have) *voluntary* standards; require no asbestos.
- Help less developed countries (LDCs) to write standards. Make model standards (like Singapore's stellar examples) available to LDCs.
- Petition the Thai government for a National Building Code that prohibits asbestos in new construction or renovations.

Non-asbestos standard development

- The Thai Industrial Standards Institute (TISI) decided to write standards for non-asbestos dual-wave and flat panel building panels.
- A committee of representatives from producers, research institutes and academia met for 2 years to write the Thai standards based mainly on ISO (International Standards Organization) standards.
- The new standards were promulgated 17 years ago in 1997.

Voluntary Standards

- There are alternatives to asbestos based products.
- Voluntary standards (for non-asbestos products) give consumers a choice of how to specify materials.
- Voluntary standards must exist for consumers to have a way to specify them.
- Voluntary standards are written after they are asked for. It takes about two years to write a standard.

Mandatory Standards

- Mandatory standards are used for products that have to do with safety issues (e.g., automotive glass, electric fans).



General (Voluntary) Industrial Standard Symbol



How standards affect the use of non-asbestos products.

- TISI publishes lists of producers who make products that meet these standards. But these lists might not be current.
- Many major companies now make non-asbestos fibre reinforced roofing and building panels in Thailand. There were none before the standards were written.
- There may still be companies that make asbestos fibre reinforced roofing and building panels that meet the voluntary Thai Industrial Standard for these products.
- The asbestos standard still exists. We could ask TISI to retire it because it is not used (if we found that to be true) or because it facilitates the specification of hazardous materials for which there are alternatives.

Strange but True

- “on July 12, 1989, the U.S. Environmental Protection Agency (EPA) issued a ban on most contaminated products, but this ruling was overturned two years later by a New Orleans court. Currently, the EPA ban affects only flooring felt, rollboard and certain types of papers.
- Products today can be made with asbestos as long as it accounts for less than 1 percent of the product. Current products include brake pads, automobile clutches, roofing materials, vinyl tile, cement piping, corrugated sheeting, home insulation and some potting soils. Although products can still be made with small amounts of asbestos”
- *Asbestos Products & Materials - Overview of Products Containing Asbestos. Retrieved 19 November 2014, from www.asbestos.com/products/