CHATAINCOURT Inc

PROTECTION CONTRE LE FEU - IGNIFUGATION

Bois • Textiles • Acier • Divers ♦ Par Peintures • Liquides • Enduits

• Licence RBQ - N° 8282-7262-18 - FACCQ N° C-2827 - Membre C.E.S.G.M - CCQ N° 524-912

• 2485 rue St. Patrick #108 - Montréal - H3K 3H7 - Québec – Canada

○ Tél: 514-934.0491 ○ Fax: 514-934.1524 ○ Email: chataincourt@ignifugationquebec.com

SINCE 1986 OUR SPECIALITY FIREPROOFING

ACIER	BOIS	TEXTILES
		

BUT WHAT FIREPROOFING ?

- **Fireproofing is a technique whose purpose is to delay or stop flames propagation, which is the general cause of all fires. The treatments of fireproofing concern generally:**
  - All Wood species and its derivatives: Paper, Paperboard.
  - Textiles made with animal and vegetal fibers, as well as synthetic materials.
  - Plastics.
  - Steel, metal structures and reinforced Concrete
- According to the support to be fireproofed, our products are presented as Paints, Liquids, Paste and their principal characteristics can be enumerated as follows:
  - **Performances approved in Canada and United States** in particular by **Intertek Testing Service - W.H** and in Europe
  - **Non toxic products** and without particular danger to human, animal and vegetable environment in general.
  - **Respect of the architecture** thanks a great hardness of surface for steel.
  - **Durability of the fire resistance** noticed in the official tests.

DEMONSTRATION

Plus de 5 000 personnes ont été témoins qu'en 15 minutes, la maisonnette peinte au latex est complètement détruite, alors que celle avec notre peinture ignifuge et intumescente est toujours intacte et que le bois sous la peinture n'est même pas attaqué

DÉBUT	8 MINUTES	15 MINUTES
		

Test carried out thanks to contribution of firemen of Montréal at training Center

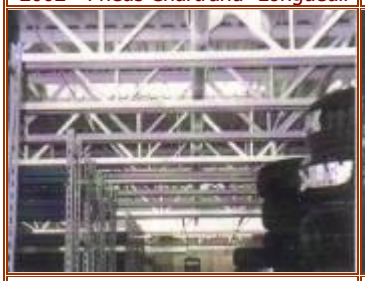
Since 1986, demonstrations have been carried out in various cities: Ste Hyacinthe, Arvida, Chicoutimi, Val d'Or, Quebec, Trois Rivières, with Toronto, New York, STCUM at the request of Committee N.F.P.A of Subway, Suburban train and Vehicle of Surface (Los Angeles, San Francisco, New York, Washington, Boston, Chicago, Denver) and others.

THE BRIEF HISTORY OF FIREPROOFING

- **At the beginning** the Men who conquered fire made a divinity out of it whom they fled without fighting when their God was let loose and transformed himself into fire. They however understood that an abundant rain extinguished the fire and, that the wetlands were spared with this disaster. The first men who dared face the fire used water.
- The archaeologists located **the first steps of fireproofing in the Antiquity**, at the time of the **Egyptians** who used minerals like clay to make certain fabrics resistant to fire like cotton.
- Fireproofing is developped in the 17 and 18 centuries with the work of **English scientist WYLD** who treated of cotton in 1735. In 1821, **French scientist GAY-LUSSAC** deposits a patent for a new formulation of the fireproofing of cotton.
- But it was significantly developed in the XX Century after World War II when it was necessary to rebuild whole cities in Europe. In France in 1947 **Mr David LURIE**, Chemical engineer, becomes one of the first to be recognized by official and scientific circles for is work on fire-proofing. He designed fireproof products which make it possible to solve the problems of reaction and fire resistance of combustible materials or not.
- From 1967 to 1994, **Mrs Rose LURIE**, Chemical engineer has worked on coatings enabling steel to resist to fire for more than 3h00. **Mr Philippe GRIMON, of Chataincourt Inc** has stayed in close cooperation with her for more than 10 years.

THE BEST MEANS OF FIGHTING AGAINST A FIRE IS TO AVOID ITS PROPAGATION, IN ORDER TO SAVE HUMAN LIVES,ANIMALS AND PROPERTIES

THANKS TO ALL OUR CUSTOMERS
WE APOLOGIZE NOT TO BE ABLE TO NAME THEM ALL

Depuis 1986 - Métro de Montréal	Depuis 1987 - Alcan	1995 – Cosmodôme - Laval	2001-2002 - Hôpital de Gaspé
			
2002 - Pneus Chartrand -Longueuil	2003 - Pourvoirie Cap au Leste	2003 - Pneus Desharnais - Québec	2003 - La Gare du Jouet - Laval
			
2003 - 2004 – Le 8100 - Brossard	2004 - Lévy Honda - Lévis	2004 - Cité Nouveau Monde- MTL	2004- 05-06 - Place Ville Marie - MTL
			
2005 –Pharmacie Brunet - Sorel	2005 - École Eardley - Aylmer	2005 – Aréna de Chibougamau	2005-06 - Les Jardins de Westmount
			

WHICH IS ACCEPTED BY THE INSPECTOR IN PREVENTION OF THE FIRE ?

FIRE REACTION
COMBUSTIBLE MATERIAL
Wood, Fabrics, Plastics, and others
Flame spread, Ex: 25 ou Class A
CAN/ULC.S –102 ou ASTM.E – 84 ou NFPA 701…

FIRE RESISTANCE
NON-FLAMME MATERIAL
Steel, Concrete and others
expressed in time, Ex: 1h00, 1h30, 2h00 …
CAN/ULC.S 101 ou ASTM.E – 119…

I WANT TO FIREPROOF A MATERIAL… WHICH TYPE OF PRODUCT SHALL I USE ?

STEEL

- Fireproofing paint And intumescent Approved 1h30
- Fireproofing paste Approved 2h00 (3h00 in Europe)

WOOD And derivatives

- Fireproofing paint
- Fireproofing varnish
- Fireproofing liquid Indoor wood
- Fireproofing liquid Papers, wall papers…
- Fireproofing liquid Outdoor Wood and others
- Fireproofing paint and intumescent Wood and others

FABRICS

- Fireproofing liquid All natural textiles
- Fireproofing liquid Synthetic fibers

CHATAINCOURT Inc – Tél : 514-934.0491 Email : chataincourt@ignifugationquebec.com

STEEL	UNTIL 2H00	STEEL



❑ STEEL

In fire reaction steel is non-flammable. It can thus be used without particular restriction. But, in a fire, the metal comes very quickly to critical temperatures; it loses its qualities of mechanical resistance. The rise in temperature of the steel element is governed by its massivity. Its high degree of conductibility causes a reduction in its capacity to support the loads between 15 to 18 minutes.

The coatings which we offer are ready to use, non toxic and without particular danger for the environment at the stage of the research. They follow the lines of the steel elements; therefore guard their esthetics, without their needing to put a gyproc protection or a false ceiling. Lastly, they can be painted with the color of your choice.

- **Fireproof and swelling coating** forming a protective meringue. **Approved until 1h30 :** CAN/ULC.4.S.101-M.89 N° 16539-114323 et ASTM.E.119
- **Fireproof coating** has a high heat insulation **Approved for 2h00** CAN/ULC.4.S.101-M.89 and ASTM.E.119

THE APPLICATION of these protection systems in general is as follows:

- Rust preventive to protect from corrosion and, to facilitate the adherence of the coating.
- From 1 to 3 coats of plaster following the fire resistance degree necessary and the type of structure to be protected.
- A finish-up paint, which will protect the whole in aggressive condition and which will follow the natural de-formations of steel or aesthetics.

❑ FIRE RESISTANCE

The concept of fire resistance, characterizes the aptitude of a structure to remain unchanged in spite of the continued action of a fire, namely:

- **STABILITY TO FIRE**
  Mechanical resistance of material.
- **FLAMES SHIELD**
  Mechanical resistance of material.
  Non exposure to flames
  Absence of flammable gas emission
- **FIRE STOP**
  Mechanical resistance of material.
  Non exposure to flames
  Absence of flammable gas emission
  Heat insulation, whose criteria are that the temperature of the non-exposed face should not exceed 140°c and locally 180°c.

The fire resistance is expressed in time during which the structural components follow the rise in temperature registed at the time of a fire by the Curve of rise in temperature and according to the Testing Methods Standardized of Fire Resistance of Constructions and Materials.

The fire protection of the same structure depends on its height and its finallity: Hospital, warehouse, factory, dwelling, museum, and others... **See the National Code of the Building Industry of Canada - Quebec Version.**

CHATAINCOURT Inc – 514-934.0491 – Email : chataincourt@ignifugationquebec.com

WOOD	WOOD	WOOD
		

❑ WOOD

* **Wood is a combustible material**. Under fire, the temperature of wood does not exceed 100°c during a few minutes, phenomenon due to moisture. A flame appears around 270°c, then wood starts to break up sending fuel gases, generating flames of more than 1000°c.

*** Over 1000°c.** the beams and posts burn down first in surface at the speed of a millimetre per minute. The thicker the burnt layer is, the more time it will take before heat reaches and accumulates in the heart of wood. It explains why **wood supports its load longer than steel**. As an example a column of 15 cm X 15 cm will resist 52 minutes without any treatment.

*** The application of a fireproofing agent** confers an index of very powerful fire performance on wood and its derivatives: thin wood panels, plywood of fibres and particles and others.This protection can be carried out by:

- Fireproof and intumescent painting, i.e. which will produce protective meringue under the action of heat while stopping the propagation of the flames. Opaque colors.
- Fireproof painting style latex for traditional colors, which delays the flames spread.
- Intumescent fireproof varnish - colourless, preserving the natural and decorative aspect wood.
- Fireproof liquid - colourless, preserving the natural and decorative aspect wood.

❑ **FIREPROOF AND INTUMESCENT PAINTING,** in aqueous phase, has as an action to delay the surface propagation of fire and the rise in temperature in the support by forming meringue. Non toxic and without particular danger to the environment. Let us note that this painting can be applied to other supports wood, like gyproc, urethanne, electric cables and others...Approved 30 ' and Flame spread 0

Approved: ASTM.E.84 and CAN/ULC.4.S.102: N°196/032200 and N°50195/c7/702400 and N°50195/c7/702400-1 and N°193-700400 and IRSST N°17264-000. • And others.

❑ **FIREPROOFS AND INTUMESCENT SYSTEM VARNISH**, has as an action to delay the surface propagation of fire and the rise in temperature in the support by forming meringue. This system is composed of 2 products:

- A varnish in solvent phase, fireproof and intumescent, whose action is to penetrate in wood fibres.
- A varnish in aqueous phase, fireproof, whose action makes it possible to increase its durability in time

Approved: ASTM.E.84 and CAN/ULC.4.S.102 N°195-702400 and N°651-0439 • And others

❑ **THE FIREPROOF SOLUTION** in aqueous phase, is intended to delay the ignition, the afterburning and the fall of the mechanical properties of all types of wood. Non toxic and without particular danger to the environment. and the natural aspect of wood does not change even for exotic species.

Approved: CAN/ULC.S.102-M88 - N°3031926 and ASTM.E.84 -98 - N°3031926 • **Since July 2006 approved for AIRBUS and EADS Development.** And others

❑ **THE FIREPROOF SOLUTION** in aqueous phase, for all kind of wood used outdoors, , is intended to delay the ignition as on the patios, roofs, shingles and others. Its durability is 7 to 10 years depending on the annual rate of pluviometry. For example in Montreal it is 7 years. ASTM.E 84 = Flame spread = 25 Smoke developed = 25

SYNTHÉTIC	FABRICS	NATURAL

❑ FABRICS

❑ The use of fireproofing liquid is very successful:

- ➢ Vegetable or animal fibres: Cotton, flax, jute, wool and others.
- ➢ Synthetic fibres including polypropylene materials

The operation is done by steeping, fulling or pulverization. The product preserves treated fabrics their flexibility and their original aspect. It keeps its qualities after some dry cleanings. However, it is always necessary to check the stability of the colors on samples.

The fireproofing of fabrics is obligatory by regulation in all the public places: Entertainment rooms, Stores, Hotels, Exhibitions rooms, Discotheques, Planes and others because these materials propagate the flame quickly. The approved durability for natural textiles is permanent under certain restrictions concerning the type of washing and 1 year for the synthetic fibres.

❑ **THE FIREPROOF SOLUTION** for natural or animal fiber textiles in aqueous phase, delays the surface propagation of fire.

Approved: •CAN/CGSB 4.2.N°27.1-M87 - NFPA 701 - Europe: LNE N°90900603 - Class - M1 • **Since July 2006 approved for AIRBUS and EADS Development.** And others

❑ **THE FIREPROOF SOLUTION** in aqueous phase for synthetic textiles, intended to delay the ignition of polyamides, polyesters, polyamides/cotton or fibres cellulose, cellulose polyesters/cotton, and others

Approved: •CAN/CGSB 4.2.N°27.1-M87 - NFPA 701 - Europe: LNE N°90900603 - Class - M1 • **Since July 2006 approved for AIRBUS and EADS Development.** And others

❑ **THE SOLUTION FIREPROOFS** in aqueous phase for polypropylene synthetic fibre textiles (ex: fitted carpet), is intended to delay the ignition and the dripping.

Approved: •CAN/CGSB 4.2.N°27.1-M87 - NFPA 701 - Europe: LNE N°90900603 - Class - M1 • **Since July 2006 approved for AIRBUS and EADS Development.** And others

THE FIREPROOF SOLUTION in aqueous phase for textiles used outdoor, is intended to delay the ignition as on fabric of tents, tarpaulins, hoods and others.

❑ FIRE REACTION

The concept of fire reaction concern what is brought to start a fire and it development by a combustible material. For Textiles the tests measure spontaneous combustion, the persistence of the flame (Maximum 2 seconds), the incandescence (non dripping), the carbonization (in millimetre) to which resistance tests to washing with water and dry cleaning are added. The tests are done on 5 pieces of fabrics in general, each one into vertical, with 45°et with 90° and folded material.

Nowadays, there is a large variety of synthetic textiles, As we very often don't know which type of material is use , we offer to make a test graciously

CHATAINCOURT Inc – 514-934.0491 – Email : chataincourt@ignifugationquebec.com

Festival Western St –TITE – Bois et textiles – 2006 à 2008

YMCA – rue Sherbrooke Ouest - Montreal - 2006

MUSÉE Pointe à Callières - Marché du XVIII 2006 à 2009

MUSÉE Pointe à Callières - Festival Inter Culturel 2006 à 2009

Parking immeuble "Les RIVES DU ST-LAURENT" - 2006

3000 Échelles de Secours MÉTRO de MONTRÉAL 2006 à 2008

PLACE VILLE MARIE – Salle des Génératrices - 2007

Spa – CABANA SOL CANADA – BROSSARD – QUÉBEC – 2005 à 2009

Colonnes - Quartier Général de la POLICE – LAVAL - 2007

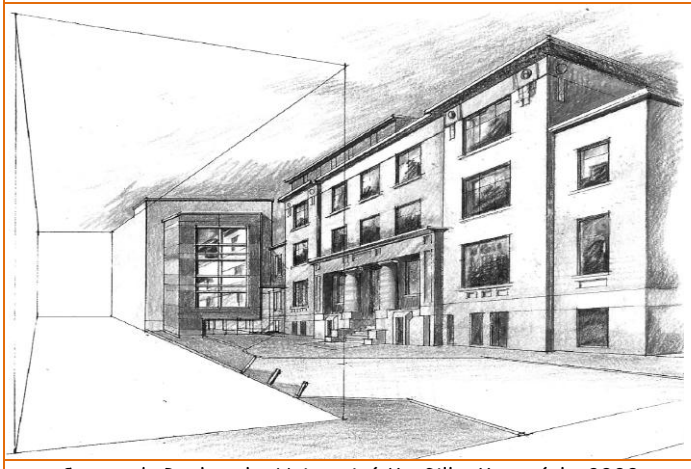
Hôtel Gouverneur –Textiles - Ile Charron - 2007

Hôpital Notre Dame – Révision Acier - Montréal - 2008

Centre des Foires - Expo-Cité – Québec – 2008

Laboratoires BRISTOL-SQUIBB-MEYER –LAVAL- 2008

Siege Social Environnement Gaudreau- Victoriaville- 2008



Centre de Recherche Université Mc Gill - Montréal - 2008

Acier - Immeuble Curateur Public– Montréal – 2007 à 2010

PRO-VIE-DANSE – Acier et textile - Ste Thérèse - 2008

IMSL –Acier - Laval - 2009

Hôtel Marriott – Acier - Aéroport de Montréal – 2009

Place Shefford – Acier – Bois - Bromont – 2009

GENERALITY

➢ All our products are considered not toxic and without particular danger to the environment, in date off January 2008, except for our varnish in phase solvent.

➢ None of our products contains Bromine (Metalloid of the family of the halogens), no formaldehyde.

➢ Their approved durability (Appendix 22) is equal to the durability of the support. In general we recommend to retreat every 10 years, because dust and fats accumulate on materials. That can be with time a propagating element of flames.

- Exception in the time, products for the synthetic fibres whose it is advised to retreat every year and fire protection for the wood and various backdrops o outdoor which recommended a reprocessing every 7 years in Quebec
- to steel, a review every five years is sufficient for any alterations.

➢ Before any fireproofing treatment make sure that the support is clean, dry, free from all matters likely to deteriorate its adherence, therefore its effectiveness.

➢ During fireproofing, always respect the covering capacity recommended to ensure the full effectiveness of fireproofing.

➢ Always use the fireproof product for the support to which he is recommended, because he is approved for treatment and normal conditions of use.

➢ Lastly, all the materials are not treatable against fire. Refer us

CHATAINCOURT Inc – 514-934.0491 – Email : chataincourt@ignifugationquebec.com