

DRAFT OF PATENT APPLICATION

SPECIFICATIONS RELATING TO THE TREATMENT OF TOBACCO WITH ORGANIC SOLVENTS IN THE VAPOUR PHASE BY WHICH MEANS THE FILLING CAPACITY OF THE TOBACCO IS IMPROVED.

This invention relates to the treatment of cigarette tobacco whereby the filling capacity of the tobacco is improved without impairing the manufacturing properties of the tobacco or reducing the acceptability, in respect to smoking qualities, of cigarettes manufactured from the treated tobacco.

The term filling capacity refers to that property of tobacco which determines its ability to resist compression. This property among others governs the yield per pound of tobacco of acceptably firm cigarettes. It follows from the above definition that in comparing two tobaccos, the tobacco from which cigarettes can be made at a lower weight without impairing the firmness of the cigarette is the tobacco with the better filling capacity. This property is measured (1) on cigarettes by their resistance to compression under different weight loads and (2) on tobacco by the volume obtained after subjecting a sample of standard weight to compression.

A means of treating tobacco by which the filling capacity of the tobacco is improved, without impairing other properties of the tobacco, is obviously advantageous to the manufacturer.

Our invention pertains to the treatment of tobacco with organic solvents in the vapour phase. The treatment is preferably carried out at or near the vapour temperature of the boiling solvent but need not be restricted to this temperature. The time of treatment may be short or long depending on the solvent used and the results desired.

Incidental to this treatment, a certain amount of the solvent vapours are condensed on the tobacco whereby an extract representing 1 - 4% of the starting weight of tobacco is removed. For this reason, the tobacco is treated at a moisture content not greater than 15% to prevent appreciable loss of nicotine.

Solvent extractions of tobacco have been described by Brummond (United Kingdom Patent No. 413,942), Roselius (U.S.A. Patent No. 2,048,624), Rothenburg (Germany, Patent No. 301,439) and Smith (U.S.A. Patent No. 1,577,768) but such processes are designed to denicotinize tobacco. To obtain this objective, the inventions cited describe processes of two or more stages which include raising the moisture content of the tobacco to a high level prior to an extraction with an organic solvent. Smith, in fact, treats tobacco with live steam at 100 - 150°C and at pressures above atmospheric, followed by an additional treatment with volatile bases such as ammonia, methylamine, etc. Rhodes (U.S.A. Patent No. 2,227,863) describes the extraction of tobacco with fluoro-chlorohydrocarbons for the removal of "tarry materials" and includes in his claim the use of normally gaseous hydrocarbons, the latter requiring the extractions to be carried out at pressures greater than atmospheric.

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Our process is a treatment of tobacco with solvent vapour and not an extraction process. The removal of extract, which represents 1 - 4% of the starting weight of tobacco, is incidental to the process. Our invention also differs from those referred to in that:

1. It is a one stage process.
2. The treatment is carried out under normal atmospheric pressures.
3. The moisture content of the tobacco when treated is no greater than 15% to minimize the amount of nicotine removed by the treatment.

According to our invention, any process by which tobacco can be placed in contact with warm or hot solvent vapours can be used. For example, in laboratory experiments the solvent was placed in the bottom of the reaction flask, the tobacco placed in a wire basket over the solvent and a condenser placed in the head of the reaction flask in such a manner that the condensed solvent was returned to the flask without passing through the tobacco. The bottom of the flask was heated with a heating mantle. All tobacco samples were processed at a moisture content not greater than 15% to prevent the removal of significant amounts of nicotine.

After treatment with the solvent vapours, the tobacco was removed from the reaction flask and air dried to remove any residual solvent. After air drying, the tobacco was re-equilibrated to the original moisture content.

The type of solvent used in our invention can be of the type miscible with water, partially miscible with water or non miscible with water and can include aliphatic hydrocarbons, cyclic hydrocarbons, aromatic hydrocarbons, alcohols, ketones, ether, esters, chlorinated solvents or a mixture of these solvents.

In the interest of better understanding of this process, examples of this treatment are given below but such examples are not to be construed in any restrictive sense.

Example 1

Approximately 350 cc. of ^{hexane} were poured into a 3000 ml. reaction flask, 100 gms. of tobacco were weighed into a wire mesh basket and the basket having a diameter slightly less than the inner diameter of the flask was placed in the flask and suspended approximately 6 inches over the surface of the solvent. The cover was placed securely on the flask and a thermometer placed in one outlet of the cover and a condenser in the other outlet. The condenser was so arranged that the condensed solvent ran back into the flask along the side of the vessel without coming in contact with the tobacco. A heating mantle was placed around the bottom of the flask and the solvent heated by this means. The tobacco was subjected to solvent vapours at a temperature of 74 - 78°C for 15 minutes.

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After treatment, the tobacco was air dried to remove any residual solvent followed by re-equilibration to the original moisture content.

An increase in filling capacity, as determined on the tobacco, of 11% was obtained.

Example 2

Tobacco samples were processed as above with different solvents and temperatures, results of these treatments are given in table I.

Imperial Tobacco Company of Canada Ltd.,
Montreal.

May 16th, 1961

J. de Souza
J. de Souza

R. Rice
R. Rice

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TABLE 1

<u>Solvent</u>	<u>Conditions of Treatment</u>		<u>Per Cent Increase In Filling Capacity Over Untreated Tobacco (Control)</u>
	<u>Temperature</u>	<u>Time</u>	
Toluene	100° ± 2° C	20 mins.	14.5
Dichloroethane	75° ± 2° C	20 mins.	6.2
Methanol	64° ± 2° C	20 mins.	15.5
n-Hexane	67° ± 2° C	20 mins.	5.9

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APPENDIX "A"

PETER JACKSON (OVERSEAS) LTD.

TRADE MARKS

COUNTRIES WHERE THE LICENSEE IS LICENSED TO SELL THE PRODUCTS DUTY PAID

TRADE MARK LICENSED COUNTRIES REGISTRATION NO.

Brand

du Maurier
Winds

Antigua	(Label)	807	
	(Label)	41	
Aruba	No mark	12317	
Bahamas	(Label)	843	App'l to 13-05
	(Label)	10590	
Barbados*	(Word)	420	
	(Label)	7807	App'l pending
	(Label)	419	
Belize	(Label)	578	(lapsed)
Bermuda	(Label)	9609	App'l No 13-05
Guyana Island	Applications are pending		
Costa Rica	(Label)	12899	App'l pending
	(Label)	61529	
Cuba*	(word)	95524	Label in US 11-27
	(Label)	105902	
	(Label)	114082	
Dominican Republic	(word)	7425	
	(Label)	7426	
	(Label)	34049	
Haiti	(Label)	255	reg. 57
		427	reg. 67
Jamaica	(Label)	10681	
	(Label)	2904	
	(Label)	Application pending	App'l 2-12-04
Martinique	(Label)	1020081	
(France)	(Label)	1202374	
Netherlands Antilles	(word)	2494	
Curacao/St. Maarten	(Label)	12430	
	(Label)	2495	
Brazil			App'l pending

Countries where Imperial Tobacco Division of Imasco Limited is already shipping product.

- ~~Colombia~~
 - ~~Algeria~~
 - ~~Mexico~~
 - ~~Pakistan~~
 - ~~Iran~~
 - ~~Venezuela~~
- Handwritten notes:*
 367317
 12713 7436
 17413 17400 2nd 20 17-03-59

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APPENDIX "A"

PETER JACKSON (OVERSEAS) LTD.

TRADE MARKS

COUNTRIES WHERE THE LICENSEE IS LICENSED TO SELL THE PRODUCTS DUTY PAID

<u>TRADE MARK</u>	<u>LICENSED COUNTRIES</u>	<u>REGISTRATION NO.</u>
<u>Brand</u> <u>du Maurier</u>	St. Lucia*	(label) 34/1982
	St. Kitts*	(label) SK. 791
	St. Vincent & The Grenadines	(label) 23/1957 (lapsed)
	Trinidad & Tobago	(label) Application pending
	Trinidad & Tobago	(label) 259/1956
	Trinidad & Tobago	(label) Application pending
	Turks & Caicos Is.	(label) 10150
	United States of America*	(word) 554759
	Caracas/Margarita	(label) Application pending
	Virgin Islands, Br.	(label) 791
	St. Croix/St. John/St. Thomas	(label) 1982

<u>Brand</u> <u>Peter Jackson</u>	Antigua	Not registered
	Bahamas	(words) 10373
	Barbados	(words) 412
	"	(label) 418
	Bermuda	(label) 5082
	Cayman Island	Not registered
	Martinique (France)	(words) 1196565 (label) 163223
	St. Lucia	Not registered
	St. Kitts	Not registered
	United States of America	(words) 571,018

*Countries where Imperial Tobacco Division of Imasco Limited is already shipping Product.

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APPENDIX "B"

PETER JACKSON (OVERSEAS) LTD.

COUNTRIES WHERE LICENSEE IS LICENSED TO OFFER FOR SALE
THE PRODUCTS IN DUTY FREE OUTLETS

- Brands: 1) ~~du Maurier~~
2) Peter Jackson *wants*

1. 3. 5

- ~~Antigua~~ (ASIA)
- Aruba
- Bahamas* 10373
- ~~Belize~~
- Bermuda* ✓
- Brazil - ~~519757300~~
- ~~Colombia~~
- ~~Costa Rica~~
- ~~Cuba~~
- ~~Curaçao~~
- ~~Dominican Republic~~
- ~~Haiti~~
- ~~Jamaica~~
- ~~Margarita~~
- Martinique (FRANCE) 119-505
- Mexico*
- Panama
- ~~Peru~~
- St. Kitts & Nevis ✓
- St. Lucia* ✓
- St. Maarten
- Trinidad
- ~~Turks & Caicos~~
- United States of America* 571019
- Venezuela, Caracas
- Virgin Islands, St. Thomas? USA - 571019
- Virgin Islands, St. Croix
- Barbados 412
- ~~Guam~~

5052
Apr. 267563 -
9332 -
Apr. 163223
252565, 333335 -
9253 -
64301 -
1740
57105-F
415

- B d

*Countries where Imperial Tobacco Division of Inasco Limited is already shipping Product.

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APPENDIX "A"

PETER JACKSON (OVERSEAS) LTD.

TRADE MARKS

COUNTRIES WHERE THE LICENSEE IS LICENSED TO SELL THE PRODUCTS DUTY PAID

<u>TRADE MARK</u>	<u>LICENSED COUNTRIES</u>	<u>REGISTRATION NO.</u>	
<u>Brand</u>			
<u>du Maurier</u>	Antigua*	(Label)	807
	"	(Label)	41
	Aruba	No Mark	
	Bahamas*	(Label)	843
	"	(Label)	10590
	Barbados*	(Word)	420
	"	(Label)	7807
	"	(Label)	419
	Belize	(Label)	578 (lapsed)
	Bermuda*	(Label)	9609
	Cayman Island*	Applications are pending	
	Costa Rica	(Label)	12899
	"	(Label)	61529
	Cuba*	(word)	95524
	"	(Label)	105902
	"	(Label)	114082
	Dominican Republic	(word)	7425
	"	(Label)	7426
	"	(Label)	34049
	Haiti	(Label)	255 reg. 57
	"		427 reg. 67
	Jamaica	(Label)	10681
	"	(Label)	2904
	"	(Label)	Application pending
	Martinique	(Label)	1020081
	(France)	(Label)	1202374
	Netherlands Antilles	(word)	2494
	Curacao/St. Maarten	(Label)	12430
		(Label)	2495

*Countries where Imperial Tobacco Division of Imasco Limited is already shipping Product.

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APPENDIX "A"

PETER JACKSON (OVERSEAS) LTD.

TRADE MARKS

COUNTRIES WHERE THE LICENSEE IS LICENSED TO SELL THE PRODUCTS DUTY PAID

<u>TRADE MARK</u>	<u>LICENSED COUNTRIES</u>	<u>REGISTRATION NO.</u>	
<u>Brand</u>			
<u>du Maurier</u>	St. Lucia*	(label) 34/1982	✓
	St. Kitts*	(label) SK. 791	✓
	St. Vincent & The Grenadines	(label) 23/1957	(lapsed)
	Trinidad & Tobago	(label) Application pending	
	"	(label) 259/1955	
	Turks & Caicos Is.	(label) Application pending	
	United States of America*	(label) 10150	
	Caracas/Margarita	(word) 554759	
	Virgin Islands, Br.	(label) Application pending	
	St. Croix/St. John/St. Thomas	(label) 791	
		(label) 1961	
<u>Brand</u>			
<u>Peter Jackson</u>	Antigua	Not registered	
	Bahamas	(words) 10373	
	Barbados	(words) 412	
	"	(label) 413	
	Bermuda	(label) 5082	
	Cayman Island	Not registered	✓
	Martinique	(words) 1196565	
	(France)	(label) 163223	
	St. Lucia	Not registered	
	St. Kitts	Not registered	
	United States of America	(words) 571,013	

*Countries where Imperial Tobacco Division of Imasco Limited is already shipping Product.

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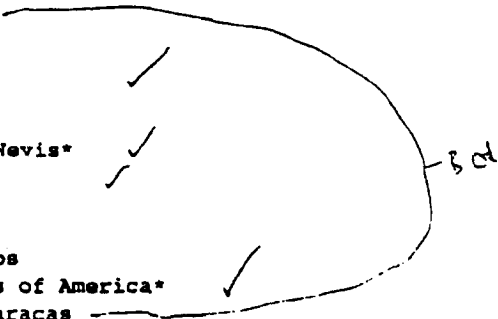
APPENDIX "B"

PETER JACKSON (OVERSEAS) LTD.

COUNTRIES WHERE LICENSEE IS LICENSED TO OFFER FOR SALE
THE PRODUCTS IN DUTY FREE OUTLETS

- Brands:
- 1) du Maurier
 - 2) Peter Jackson

Antigua* (1950s)
Aruba
Bahamas*
Belize
Bermuda* ✓
Brazil — Same
Colombia
Costa Rica
Cuba*
Curacao
Dominican Republic
Haiti
Jamaica
Margarita
Martinique
Mexico* ✓
Panama
Peru
St. Kitts & Nevis* ✓
St. Lucia* ✓
St. Maarten
Trinidad
Turks & Caicos
United States of America* ✓
Venezuela, Caracas
Virgin Islands, St. Thomas
Virgin Islands, St. Croix



*Countries where Imperial Tobacco Division of Imasco Limited is already shipping Product.

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APPENDIX "C"

PETER JACKSON (OVERSEAS) LTD.

INTERNATIONAL AIRPORTS FOR DUTY FREE SALE OF THE PRODUCTS BY LICENSEE

- Brands:
- 1) du Maurier
 - 2) Peter Jackson

<u>Airport/City</u>	<u>Country</u>
<u>Europe</u>	
Heathrow	U.K.
Gatwick	U.K.
Glasgow	U.K.
Manchester	U.K.
Shannon	Ireland
Bruxelles National	Belgium
Charles de Gaulle	France
Orly	France
Frankfurt	Germany
Milan	Italy
Rome	Italy
Amsterdam	Holland
Vienna	Austria
Lisbon	Portugal
Madrid	Spain
Barcelona	Spain
Zurich	Switzerland
Geneva	Switzerland
Athens	Greece
Stockholm	Sweden
Copenhagen	Denmark
Moscow	Russia
Budapest	Hungary
Zagreb	Yugoslavia
<u>Asia</u>	
Tokyo	Japan
Hong Kong	Hong Kong
Singapore	Singapore
Bangkok	Thailand
Bombay	India
Seoul	Korea
<u>Australia</u>	
Melbourne	Australia
Sydney	Australia
Auckland	New Zealand

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APPENDIX "D"

IMPERIAL TOBACCO LIMITED

<u>TRADE MARK</u>	<u>LICENSED AREAS</u>	<u>REGISTRATION NO.</u>
Du Maurier	Canada	(word) TMA 294,348
Peter Jackson	Canada	(words) TMA 131,951

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APPENDIX "A"

PETER JACKSON (OVERSEAS) LTD.

TRADE MARKS

COUNTRIES WHERE THE LICENSEE IS LICENSED TO SELL THE PRODUCTS DUTY PAID

<u>TRADE MARK</u>	<u>LICENSED COUNTRIES</u>	<u>REGISTRATION NO.</u>	
<u>Brand</u>			
<u>du Maurier</u>	Antigua*	(Label) -----	807
	"	(Label) -----	41
	Aruba	No Mark	12319
	Bahamas*	(Label) -----	843
	"	(Label) -----	10590
	Barbados*	(Word)	420
	"	(Label) -----	7807
	"	(Label) -----	419
	Belize	(Label) -----	578 (lapsd)
	Bermuda*	(Label) -----	9609
	Cayman Island*	Applications are pending	
	Costa Rica	(Label) -----	12899
	"	(Label) -----	61529
	Cuba*	(word)	95524
	"	(Label) -----	105902
	"	(Label) -----	114082
	Dominican Republic	(word)	7425
	"	(Label) -----	7426
	"	(Label) -----	34049
	Haiti	(Label) -----	255 reg-57
	"	427	reg-67
	Jamaica	(Label) -----	10681
	"	(Label) -----	2904
	"	(Label) Application pending	
	Martinique	(Label) -----	1020081
	(France)	(Label) -----	1202374
	Netherlands Antilles	(word)	2494
	Curacao/St. Maarten	(Label) -----	12430
		(Label) -----	2495

*Countries where Imperial Tobacco Division of Inasco Limited is already shipping Product.

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APPENDIX "A"

PETER JACKSON (OVERSEAS) LTD.

TRADE MARKS

COUNTRIES WHERE THE LICENSEE IS LICENSED TO SELL THE PRODUCTS DUTY PAID

<u>TRADE MARK</u>	<u>LICENSED COUNTRIES</u>	<u>REGISTRATION NO.</u>
<u>Brand</u> <u>du Maurier</u>	St. Lucia*	(label) 34/1982
	St. Kitts*	(label) SK. 791
	St. Vincent & The Grenadines	(label) 23/1957 (lapsed)
	Trinidad & Tobago	(label) Application pending
	"	(label) 259/1956
	"	(label) Application pending
	Turks & Caicos Is.	(label) 10150
	United States of America*	(word) 554759
	Caracas/Margarita	(label) Application pending
	Virgin Islands, Br.	(label) 791
St. Croix/St. John/St. Thomas	(label) 1061 (USA) word 554759	
<u>Brand</u> <u>Peter Jackson</u>	Antigua	Not registered
	Bahamas	(words) 10373
	Barbados	(words) 412
	"	(label) 418
	Bermuda	(label) 5082
	Cayman Island	Not registered
	Martinique (France)	(words) 1196565 (label) 163223
	St. Lucia	Not registered
	St. Kitts	Not registered
	United States of America	(words) 571,018

*Countries where Imperial Tobacco Division of Imasco Limited is already shipping Product.

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