

associação brasileira da indústria de
madeira compensada e industrializada

ABIMCI

ITTO

INTERNATIONAL TROPICAL TIMBER ORGANIZATION

PROJECT COMPLETION REPORT

A-PROJECT IDENTIFICATION

**TITLE: INTRODUCTION OF LESSER KNOWN SPECIES IN THE AMAZON
PLYWOOD INDUSTRY**

SERIAL NUMBER: PD 93/90

**EXECUTING AGENCY: ABIMCI- BRAZILIAN ASSOCIATION OF
PLYWOOD AND PROCESSED TIMBER INDUSTRY**

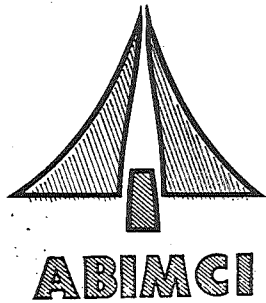
HOST GOVERNMENT: GOVERNMENT OF BRAZIL

STARTING DATE: APRIL, 1991

ACTUAL DURATION: 27 MONTHS

ACTUAL PROJECT COST: US\$ 239,540.00





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PART I- EXECUTIVE SUMMARY

1 BACKGROUND INFORMATION ABOUT THE PROJECT

- SPECIFIC OBJECTIVE

The objective of the study was to select and introduce tropical lesser known species to the Amazon plywood industry, specifically as core veneers for plywood.

- PROJECT JUSTIFICATION

The Amazonian forest is the largest forest in the world, and the greatest species variability is there. A large number of species is responsible for the total volume of exploitable wood, but only a few species are used and traded. In plywood production approximately 20 species are used.

Based on physical and mechanical features and on researches developed about wood utilization, it is estimated that more than one hundred species are potentially usable for plywood production.

Using a larger number of species, it is expected a reduction in transporting and logging costs, besides the decrease in the area needed for exploitation.

Wood represents the largest cost item in plywood production and the use of a greater number of species can also represent a significative reduction in production costs.

The introduction of lesser known species for core veneer should not be affect by the market because it is traded by its face veneers. So, core can be made of any species, if physical and mecanical features do not affect significantly the final quality of plywood.

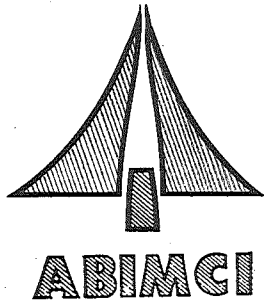
At the same time costs diminish, the volume of higher value veneers used as core also decreases. In a long term analysis, this situation may contribute to reduce the impact on forest cost caused by selective exploitation.

- OUTPUTS

Products to be obtained in this study are the following:

- . A list of lesser known wood species apt to be used as core veneers.
- . To determinate physical and mechanical properties of the plywood produced with selected species and publish the results.
- . To evaluate effects on costs of logging and plywood production.
- . To promote a seminar on plywood production in tropical Latin America where the project's results and other issues concerning the activity would be discussed. The foreseen seminary was turned into an international Congress held in Manaus, in October, 1992.





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- INPUTS

To develop the proposed project, the following inputs were considered:

- . Work Team:
 - . 1 - Senior Wood Technologist (team leader)- 24 months;
 - . 2 - Wood Industry Engineers- 24 months;
 - . 2 - Assistants- 12 months;
 - . 1 - Economist (consultant)- 3 months.

- OTHER INPUTS:

- . Wood Technology Laboratory;
- . Travel and accomodation costs;
- . General expenses on seminar promotion (1st International Tropical Timber Plywood Congress).

ABIMCI- Brazilian Association of Plywood and Processed Timber Industry contributed involving plywood industries, that were responsible by log supply, veneer and plywood production. ABIMCI managed the project, divulged the reports of the work in progress, supported the publishing of the final report , the organization of the Plywood Congress and the preparation of the proceedings.

- DURATION AND PLANNED COSTS

The total period planned for the duration of the project was 24 months. The schedule of the planned activities is presented at table 1. The costs to implement the project were the following:

ITEM	US\$
Project personal	181,540.00
Travel and accomodation	16,000.00
Laboratory expenses	10,000.00
Congress promotion	32.000,00
TOTAL	239,540.00

* Total cost of the Congress was approximately US\$ 198,000.00. ABIMCI had the support of its members, Government of Amazonas, equipment producers and other organizations to cover the extra costs.



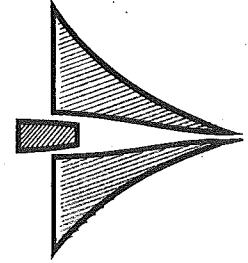
NUMEROS ATUAIS
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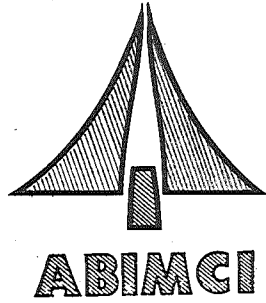
Table 01 - Original Work Plan

STAGE	YEAR 1				YEAR 2																			
	1	2	3	4	1	2	3	4																
1. PLANNING	///																							
2. DATA COLLECTION AND ANALYSES	///	///																						
3. INDUSTRY SELECTION		///																						
4. SPECIES SELECTION																								
- Forestry		///																						
- Manag. Inventory			///																					
- Logging				///																				
5. VENEER/PLYWOOD PRODUCTION				///	///																			
6. PROPERTIES/QUALITY EVALUATION																								
- Quality					///	///																		
- Properties						///	///																	
7. ECONOMIC STUDIES																								
- Data Collection			///	///	///	///																		
- Determination					///	///	///																	
8. SEMINAR PREPARATION					///	///	///	///																
9. SEMINAR PROMOTION								///																
10. WORK PROGRESS REPORTS			///		///		///																	
11. FINAL REPORT								///																
MONTH	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M
YEAR	1991										1992										1993			

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2 PROJECT ACHIEVEMENTS

- OUTPUTS ACHIEVED

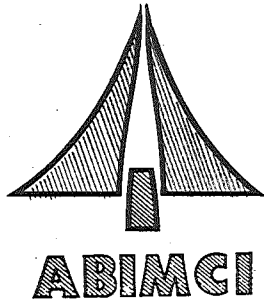
. Species list

For the fulfilment of the work, two areas were selected, one in the state of Pará (firm land area) and another one in the state of Amazonas (flooded land area). In these areas, 22 species were selected and tested (12 from firm land and 10 from flooded land) and with these, core veneer and plywood were produced. Table 2 shows a list of the species used in this work.

Table 2- Species tested

FIRM LAND SPECIES		FLOODED LAND SPECIES	
COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME
Melancieira	<i>Alexa grandiflora</i>	Paricana	<i>Acácia polyphylla</i>
Cajú-açú	<i>Anacardium giganteum</i>	Mumuti	<i>Pterocarpus amazonicus</i>
Amapá-doce	<i>Brasimum parinarioides</i>	Murupita	<i>Sapium marnieri</i>
Pau-jacaré	<i>Laetia procera</i>	Arapari	<i>Macrobium acaciaetolium</i>
Mamorara	<i>Bombax sp</i>	Munguba	<i>Bombax munguba</i>
Mumuré	<i>Brosimum acutifolium</i>	Louro inhamui	<i>Ocotea cymbarum</i>
Guariuba	<i>Clarissa racemosa</i>	Macacarecuia	<i>Courupita guianensis</i>
Para'-pará	<i>Jacaranda copaia</i>	Jacareúba	<i>Callophyllum brasiliense</i>
Axixá	<i>Sterculia pilosa</i>	Assacu	<i>Hura creptans</i>
Curubixá	<i>Micropholis gardnerianum</i>	Muiratinga	<i>Maquira sclerophylla</i>
Mirindiba	<i>Glycydendrom amazonicum</i>		
Tachi pitomba	<i>Sclerobium paraensis</i>		

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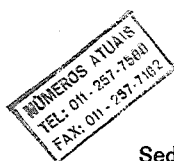
Physical and mechanical properties

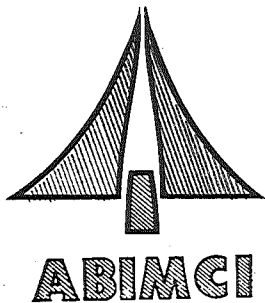
The physical and mechanical properties of plywood produced with selected species are shown at table 3.

Table 3-Physical and Mechanical Properties of Plywood Produced with Selected Species

SPECIES COMMON NAME	MOITURE CONTENTS (%)	SPECIFIC GRAVITY (g/cm ³)	BENDING STRENGTH (N/mm ²)		SHEAR STRENGTH (N/mm ²)
			PARALLEL MOE-MOR	PERPENDICULAR MOE-MOR	
Melancieira	13.3	0.590	9,115-57.2	2,784-28.4	1.21
Caju-açu	14.7	0.487	7,697-44.7	4,926-36.6	1.52
Amapá-doce	10.9	0.607	12,322-71.0	4,353-40.3	1.74
Pau-jacaré	11.3	0.734	14,760-81.6	4,643-40.6	2.08
Mamorana	11.5	0.548	11,110-62.3	3,824-32.9	1.75
Mumuré	11.1	0.609	11,545-73.8	3,994-41.3	2.02
Guariuba	10.1	0.706	12,563-82.7	4,582-50.9	2.35
Pará-pará	15.4	0.374	6,722-37.2	2,791-22.0	1.65
Axixá	12.7	0.557	10,688-66.9	3,840-36.7	1.96
Curubixá	11.7	0.595	11,026-71.7	4,031-38.3	2.43
Mirindiba	9.3	0.781	15,454-75.6	4,771-30.9	1.80
Tachi Pitomba	12.8	0.649	13,380-80.7	4,594-48.6	2.10
Paricana	13.3	0.425	8,743-56.5	3,808-28.4	0.83
Murupita	9.6	0.399	7,572-48.6	2,122-21.8	0.60
Mututi	9.3	0.508	10,210-68.1	3,089-35.4	0.77
Muiratinga	8.9	0.478	9,867-63.6	2,702-31.3	0.63
Arapari	11.0	0.508	7,178-51.8	2,026-27.4	0.75
Munguba	12.4	0.382	9,795-57.3	1,093-13.2	0.83
Louro Inhami	8.1	0.603	10,647-73.6	3,197-41.3	0.72
Macacarecuia	9.3	0.394	6,500-52.0	1,800-22.1	0.56
Jacareúba	9.8	0.628	11,143-77.7	3,391-39.7	0.66
Assacu	11.5	0.339	4,369-3.70	1,592-18.1	0.59

NOTE: MOE = MODULUS OF ELASTICITY
MOR = MODULUS OF RUPTURE





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. Economic appraisal

With the introduction of lesser known species, a reduction in the costs of logging and plywood production were obtained. Table 4 shows total costs for each situation considering firm and flooded land area

Table 4 -Costs of Exploitation and Plywood Production

ALTERNATIVES	FIRM LAND		FLOODED LAND	
	EXPLOITATION (US\$/m ³)	PLYWOOD PRODUCTION (US\$/m ³)	EXPLOITATION (US\$/m ³)	PLYWOOD PRODUCTION (US\$/m ³)
A-Costs considering only traditional species	31.83	258.62	33.69	244.31
B-Costs considering traditional species plus selected ones	25.17	249.44	25.59	230.30
Cost variation ((B-A)/A* 100)	-21%	-4%	-24%	-6%

. Seminar/Congress

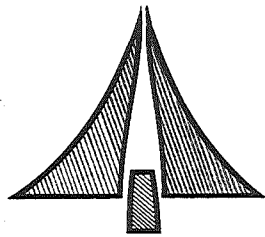
To discuss the present situation and future perspectives of plywood based on tropical wood, ABIMCI- Brazilian Association of Plywood and Processed Timber turned the foreseen seminar into the 1st International Congress on Tropical Timber Plywood.

The congress was held from 27 to 30 of October, 1992, in Manaus, capital of the state of Amazonas-Brazil, and its basic objective was to discuss the "Development of the Tropical Timber Plywood Industry in Latin America and Caribbean", debating on the following subjects:

- . Tropical forests and plywood industry resources;
- . Technology in plywood production;
- . Political, economic and social aspects.

The Congress was also used as a forum to present and discuss the achieved developments in the conduction of the project "Introduction of Lesser Known Species in Plywood Industry in Amazon".

Approximately 250 people from 14 countries attended the Congress. The proceedings of the Congress were prepared and published.



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. Achieved specific objective

Of the 22 lesser known species presented at table 2, only 7 species presented serious problems and are not recommended to be used in plywood. They are:

Pau-jacaré	-	<i>Laetia procera</i>
Pará-pará	-	<i>Jacaranda copaia</i>
Mirindiba	-	<i>Glycydendrom amazonicum</i>
Tachi-pitomba	-	<i>Sclerolobium paraensis</i>
Paricarana	-	<i>Acacia polyphylla</i>
Arapari	-	<i>Macrolobium acaciaefolium</i>
Munguba	-	<i>Bombax munguba</i>

The other species produced panels of acceptable quality. As the objective of the work is to identify species to use as plywood core, the 15 species selected in the tests are technically viable. So, the specific objective of the project is considered to be fully achieved.

3 - TARGET BENEFICIARIES INVOLVEMENT

ABIMCI participation in the project was very active at all steps of the work development. The companies AMAPLAC in Manaus-Amazonas and KARSON in Xinguara-Pará actively took part in log collecting and plywood production.

After ABIMCI makes the results public, a larger number of companies will certainly start to use tested species in their normal production. The best indicator of these position was identified just at the completion of industrial tests. The companies that supported the study (KARSON and AMAPLAC) already incorporated in their species mix some of the tested species.

4 - LESSONS LEARNED

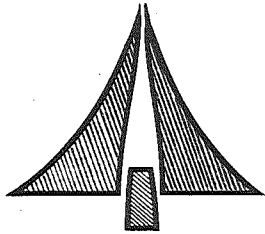
a) Development Lessons:

From a wider point of view, the main learned lesson is that the introduction of lesser known species has a share of contribution in the feasibility of tropical forests sustainable management. This contribution can not be overestimated because there are technical variables that influenced the economic result of a plywood mill based on tropical wood.

The obtained results are extremely important for Amazonian industry and can be directly applied. This was possible to reach thanks to the involvement that plywood producers (associated to ABIMCI) had during the development of this study.

It is definitely proved that the introduction of lesser known species is not limited by technical, but by economic barriers.

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b) Operational lessons

The initial plan was considered to be suitable, though several adjustments at operational levels had to be done. This was a consequence of the operational difficulties in regions with little infrastructure as it is the Amazon.

The direct involvement of the companies, since material collecting until plywood production was fundamental. From the several activities, it was possible to finish the project in the initially foreseen budget. Besides this, the involvement of the companies was fundamental to give the studies an applied character, and also to help in the immediate determination of the results.

To implement the project two companies and two institutions were involved. The functions and responsibilities of the companies and institutions were:

- . ABIMCI- Brazilian Association of Plywood and Processed Timber Industry. It was responsible for the execution of the project PD 93/90, organizing the project and specifically the seminar (turned into the 1st International Congress of Tropical Wood Plywood).
- . IBAMA- Brazilian Institute of Environment and Renewable Natural Resources. It took part through its department- LPF- Forest Products Laboratory- in the laboratory analysis determining the physical and mechanical properties of plywood produced with selected lesser known species.
- . Madeireira Karson do Pará- Plywood mill that lent its plant for the execution of the tests, since exploitation until plywood production. In this company, works referred to firm land species.
- . Amaplac S/A- Plywood mill that lent its plant to develop industrial tests with flooded land species.

The differences between planned and executed activities, regarding the schedule, happened in the collecting step (exploitation) in flooded land areas. The reason for the delay is that there are well defined periods to transport logs through rivers, that is, in flood time. The problem is that, in 1992, the river flood was approximately 3 months late. This factor can not be manipulated, therefore, at the moment of planning, the possibility of such interference should be considered.

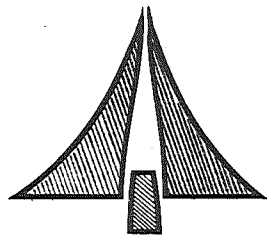
Concerning project costs, they were all practically covered by the initially foreseen budget. Only the expenses foreseen for the seminar were substantially higher. The reason was that the seminar was turned into a large Congress, but the difference in the expenses was covered by contributions of companies, institutions, participants and others.

Few factors significantly interfere in the achievement of project's objectives. Among the occurred problems, we can mention:

- . Organization problems of the companies that supported the study caused difficulties in data raising;
- . Equipment problems (old) that did not allowed to obtain results with a better quality;

These problems caused a waste of time, and did not allowed more detailed studies during industrial tests.





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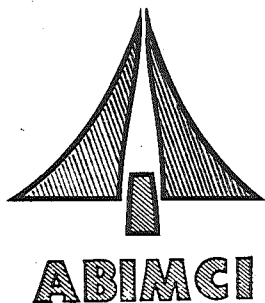
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5 - RECOMMENDATIONS

Considering the experience gained in the execution of this project, we recommend, to improve the efficiency in the execution and the quality of results to be obtained, the observation of the following aspects:

- The full involvement of the production sector (private companies) already in the project preparation phase;
- Allow more time to the practical work at the field in such manner that, if necessary, tests can be repeated.

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PART II- MAIN TEXT

PROJECT RESULTS

As known the Amazon forest is very heterogeneous, and this is a limitation to the development of the timber industry. Based on the results of this study at least 15 new species can be considered for plywood production, representing a substantial increase on the number of species already in use.

The inclusion of the new selected species will also increase wood availability per exploited hectare, (almost double the present availability), allowing a reduction of exploitation costs in 25%.

In this study, the total reduction of costs were not exceptional (5% for firm land and 7% for flooded land), but it allows to diminish the risks of economic failure for the companies that work in the region.

The main impact caused by the results of this study is a consequence of the fact that, with the increase of wood offered by the forest, it is necessary a smaller area. The direct consequence is the reduction of land investments.

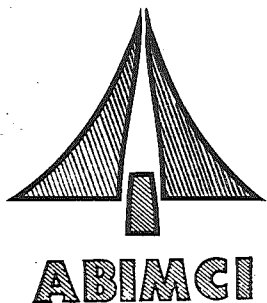
In a general sense, the increase of species number will contribute to reduce the impact on natural resources caused by selective exploitation.

6 - SYNTHESIS OF THE ANALYSIS

- | | |
|-------------------------------------|--|
| a) Specif Objective(s) Achievement: | <input checked="" type="checkbox"/> Realised
<input type="checkbox"/> Partly realiaed
<input type="checkbox"/> Unrealised |
| b) Outputs | <input checked="" type="checkbox"/> Realised
<input type="checkbox"/> Partly realised
<input type="checkbox"/> Unrealised |
| c) Schedule | <input type="checkbox"/> In advance/on time
<input checked="" type="checkbox"/> Delayed but not seriously
<input type="checkbox"/> Seriously delayed |
| d) Actual Expenditures | <input type="checkbox"/> Below planned
<input type="checkbox"/> More than 10% above planned
<input checked="" type="checkbox"/> More than 20% above |

REMARKS: Actual expenditures exceeded the original budget due to the implementation of the International Congress on Tropical Timber Plywood, instead of the seminar initially planned. Extra costs were paid by plywood producers, Government of Amazonas, equipment producers and other organizations.





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PART III- CONCLUSIONS AND RECOMMENDATIONS

The main conclusions of the report can be summarized as the following:

- i) The introduction of lesser known species in the Amazonic Plywood Industry, under the conditions studied, can reduce significantly logging costs;
- ii) Technical problems in the utilization of new species, using the presently adopted technology in the Amazon, reduces the yield and increases the costs of plywood production;
- iii) As an overall result, the introduction of new species in the plywood industry, reduces the costs of the final product of about 5% ;
- iv) In spite of the small reduction in the costs of production, this can represent a significant contribution to the achievement of sustainable management of tropical forests;
- v) Out of the 22 species tested at least 15 species can be used for plywood production. This will represent a substantial increase in availability of new material for the industry, as at the present a very limited number of species is utilized;
- vi) The introduction of the new species is not expected to create any market problem. Evaluation of quality and properties of the final products indicated that the panels produced with new species are similar to the presently market ones;
- vii) The involvement of the plywood industry in all phases of the project was considered fundamental to the success of the project. By doing so costs of the project were reduced and dissemination of the results was facilitated.

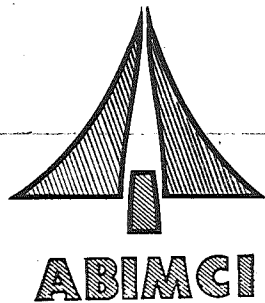
Based in the conclusions obtained , it is recommended that:

- i) In any study related to the introduction of new species, it has to be considered not only the technical operational limitation, but mainly economical constraints;
- ii) A great involvement of the tropical timber production chain in the project formulation and implementation should be considered in similar projects in the future. This increases the project implementation performance, reduces costs, and facilitates determination and application of the project results;
- iii) In spite of the fact that the projects achievements are fully applicable, and immediate gains can be obtained by the plywood industry, further developments are necessary, covering technological aspects for production and training at all levels. It is recommended that a specific project covering this two aspects should be prepared in consultation with plywood producers.


Ivan Tomaselli
Project Team Leader

São Paulo, August 30, 1993.





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PROJETO ITTO/ABIMCI

Demonstrativo Financeiro

(US\$)

RECEITAS		DESPESAS	
A - Recebimentos ITTO		B - Dispendios Finais	
A.1 - Em abril/91	80.000,00	B.1 - Pessoal	178.608,00
A.2 - Em janeiro/92	80.000,00	B.2 - Viagens/estadas	16.000,00
A.3 - Em julho/92	79.540,00	B.3 - Trabalhos de Laboratórios	10.000,00
		B.4 - Seminário	32.000,00
		B.5 - Diversos	2.932,00
TOTAL GERAL	239.540,00	TOTAL GERAL	239.548,00

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PROJETO ITTO/ABIMCI

Relatório de Despesas - (US\$)

1) PESSOAL TÉCNICO

1.1 - Dr. Ivan Tomaselli -	Coordenador - abril/91 a setembro/92 -	18 meses x	2.300,00	41.400,00
1.2 - Joésio Siqueira -	Engenheiro - abril/91 a setembro/92 -	18 meses x	2.000,00	36.000,00
1.3 - Aguiar Ferreira -	Engenheiro - junho/91 a setembro/92 -	18 meses x	2.840,00	45.440,00
1.4 - Nélcio Castro -	Engenheiro - junho/91 a outubro/92 julho/92 a agosto/92 -	07 meses x	4.000,00	28.000,00
1.5 - Bernard Delespinasse -	Engenheiro - outubro/91 a setembro/92 -	12 meses x	2.314,00	27.768,00
Total do Item				178.608,00

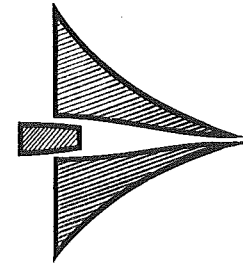
2) VIAGENS/ESTADIAS

2.1 - Valores Finais conforme anexo 01 -	Total do Item	16.000,00
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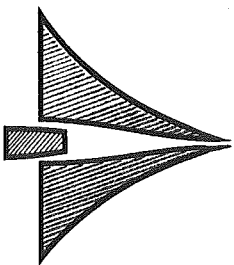
3) TRABALHOS DE LABORATÓRIO (Testes de corpos de prova - Propriedades Físicas e Mecânicas)

3.1 - Preparação de Corpos de Provas	2.900,00
3.2 - Transportes do Material	1.242,00
3.3 - Testes e Avaliação Laboratoriais	5.858,00
Total do Item	10.000,00

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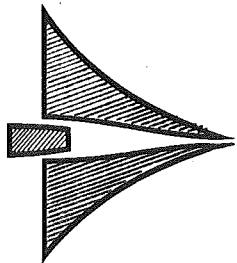
4) SEMINÁRIO	
4.1 - Valores Finais conforme anexo 02	Total do Item 32.000,00
5) DESPESAS DIVERSAS	
5.1 - Diferenças relativas a conversões cambiais	2.842,00
5.2 - Despesas bancárias relativas a transferências	90,00
	=====
Total do Item	2.932,00
TOTAL GERAL	239.540,00

NÚMEROS ATUAIS
TEL: 011-257-7388
FAX: 011-257-7162

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ANEXO 01
VIAGENS/ESTADIAS

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Dia / Viagem	Rotina	Transporte	Duração	Participantes	Custo (R\$)
25.08 a 04.10.91	Curitiba/Goiânia/Xinguara/Redenção/Curitiba	Veículo Locado	40 dias	Bernard Delespinasse Aguimar Ferreira (Parcial) Walfred Klitzke	5.901,50
10.09 a 13.09.91	Curitiba/ Belém/Brasília/Curitiba	Aérea	03 dias	Joésio Siqueira	752,00
09.09 a 27.09.91	Redenção/Belém/Macapá/Belém/Curitiba	Aérea	18 dias	Aguimar Ferreira (Parcial)	1.494,10
02.12 a 12.12.91	Curitiba/ Manaus/Labrea/Manaus/Curitiba	Aérea	10 dias	Aguimar Ferreira	1.480,39
19.01 a 22.01.92	Curitiba/Macapá/Belém/Brasília/Curitiba	Aérea	03 dias	Joésio Siqueira	722,79
09.02 a 12.02.92	Curitiba/Rio de Janeiro/Macapá/Belém/Rio de Janeiro/Curitiba	Aérea	03 dias	Joésio Siqueira	777,21
15.06 a 17.06.92	Curitiba/Manaus/Curitiba	Aérea	02 dias	Ivan Tomaselli	529,47
23.06 a 25.06.92	Curitiba/Brasília/Curitiba	Aérea	02 dias	Ivan Tomaselli	366,36
29.07 a 22.08.92	Curitiba/Cuiabá/Rondônia/Curitiba	Terr/Aérea	24 dias	Aguimar Ferreira e Jefferson Garcia	2.998,91
26.10 a 31.10.92	Curitiba/Manaus/Curitiba	Aérea	05 dias	Bernard	977,27
TOTAL					16.000,00

NUMEROS ATUAS
TEL: 011 - 257-7859
FAX: 011 - 257-7162

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ANEXO 02
SEMINÁRIO

Local: Manaus/Amazonas

Período : 27 a 30.10.92

Promoção: ABIMCI

Verba Alocada: US\$ 32,000.00

RELATÓRIO DE DESPESAS (US\$)

A) PASSAGENS AÉREAS

A.1 - Internacionais (convidados estrangeiros)

1.1 - Mr. Russel Etadelman - L.H.P.A - USA	1,868.00
1.2 - Mr. Enrique Gonzales - Câmara Nacional FL - Peru	1,325.00
1.3 - Mr. T. Mallinson - Forest Forever - U.K.	4,207.00

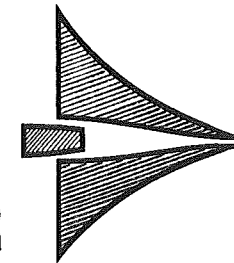
sub-total 7,400.00

A.2 - Nacionais (convidados)

2.1 - Srª Sonia Grenteski - Curitiba -	368.70
2.2 - Sr. Pedro Riqueiral - Curitiba -	368,70
2.3 - Sr. Adriano Martins - Curitiba -	368,70
2.4 - Srª Isabele Bacellar - Curitiba -	368,70
2.5 - Sr. Francisco Souza - Curitiba -	368,70
2.6 - Sr. Amantino Freitas - São Paulo -	347,85

sub-total 2,191.35

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NÚMEROS ATUAS
TEL.: 011 - 257.3886
FAX: 011 - 257.7192

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NÚMEROS ATUAIS
TEL: 011 - 363.2469
FAX: 011 - 363.7192

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ANEXO 02
SEMINÁRIO

Local: Manaus/Amazonas

Período: 27 a 30.10.92

Promoção: ABIMCI

Verba Alocada: US\$ 32,000.00

RELATÓRIO DE DESPESAS (US\$)

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A.1 - Internacionais (convidados estrangeiros)

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1.3 - Mr. T. Mallinson - Forest Forever - U.K.	4,207.00

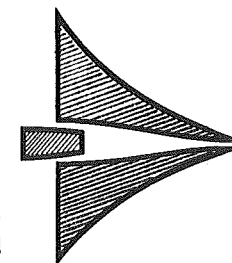
sub-total 7,400.00

A.2 - Nacionais (convidados)

2.1 - Srª Sonia Grenteski - Curitiba -	368.70
2.2 - Sr. Pedro Riqueiral - Curitiba -	368,70
2.3 - Sr. Adriano Martins - Curitiba -	368,70
2.4 - Srª Isabele Bacellar - Curitiba -	368,70
2.5 - Sr. Francisco Souza - Curitiba -	368,70
2.6 - Sr. Amantino Freitas - São Paulo -	347,85

sub-total 2,191.35

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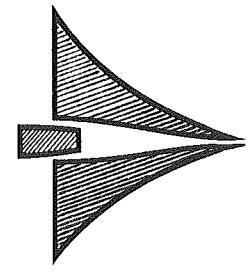


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NUMEROS ATUAIS
 TEL: 011 363-7568
 FAX: 011 363-7162

Sede: Rua Cel. Xavier de Toledo, 264 - 6º Andar - Condi. 65/68 - CEP 01048-100 - São Paulo - SP - BRASIL
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A.3 - Nacionais (ABIMCI)

3.1 - Dr. Luiz A. Garaldi de Almeida - Presidente da ABIMCI	347,85
3.2 - Dr. Ivan Tomaselli - Team Leader Proj. ITTO/ABIMCI	368,70
	<hr/>
sub-total	716,55
	<hr/>
TOTAL DO ITEM	10,307.90

B) MATERIAL PROMOCIONAL

B.1 - Gráfico

1.1 - Cartões de visita	53,44
1.2 - Pergamino com estojo	74,68
1.3 - Impressão 5.000 Folders	217,30
1.4 - Impressão 6.000 folhas ABIMCI	52,87
	<hr/>
sub-total	398,29

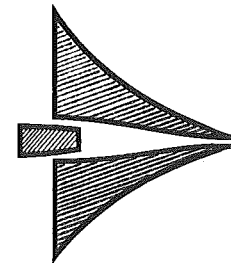
B.2 - Papelaria

2.1 - Papel sulfite - 20.000 folhas	148,76
2.2 - Papel e envelopes	87,84
	<hr/>
sub-total	236,60

NÚMEROS ATUAIS
TEL: 011 257-7158
FAX: 011 257-7152

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B.3 - Audio Visual

3.1 - Fitas de vídeo s/Amazônia (inglês/Português)

Produção de 100 cópias

2,018.92

3.2 - Gravação do Congresso

248,94

sub-total 2,267.86

B.4 - Diversos

4.1 - Uniformes para recepcionistas

473,41

4.2 - Bandeira Brasileira para o Congresso

68,76

sub-total 542,17

TOTAL DO ITEM 3,444.92

C) ORGANIZAÇÃO DO CONGRESSO

C.1 - Empresa Organizadora

1.1 - Serviços de Tradução simultânea

3,417.84

1.2 - Pessoal de apoio (secretárias/recepcionistas)

2,707.61

sub-total 6,125.45

TOTAL DO ITEM 6,125.45

NÚMEROS ATUAIS
TEL.: 011 - 257-7368
FAX: 011 - 257-7182

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D) HOSPEDAGEM/ALIMENTAÇÃO/EVENTOS SOCIAIS

D.1 - Hotel Tropical

1.1 - Estadia Pessoal ABIMCI	1,517.49
1.2 - Refeições	1,662.66
1.3 - Coquetéis - (02 eventos)	6,216.58

sub-total 9,396.73

D.2 - Alimentação

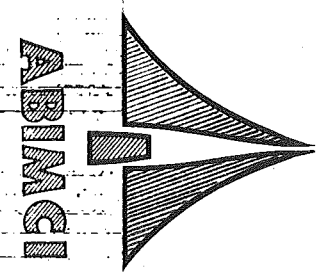
1.1 - Jantar de encerramento - 220 pessoas	2,725.00
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sub-total 2,725.00

TOTAL DO ITEM 12,121.73

TOTAL GERAL 32,000.00

NOTA: As despesas indicadas neste relatório são parciais, visto que os custos totais ultrapassam o valor de US\$ 32,000.00 e foram suportados pela ABIMCI.



Associação Brasileira de Indústria de Madeira Compensada e Industrializada