MINUTES OF THE ANNUAL MEMBERSHIP MEETING

OF THE

FRICTION MATERIALS STANDARDS INSTITUTE, INC.

Sunday and Monday, June 11 and 12, 1995

Longboat Key Club

Longboat Key, Florida

ACTIVE MEMBERS PRESENT	REPRESENTATIVES
Abex Friction Products	Walter Britland
AlliedSignal Braking Systems - Americas	Larry Mintman
Brake Parts, Inc.	Donald Delvy
Carlisle Corporation	Bill Wood
Ferodo America, Inc.	Steve Tilton
Fibro Friction, Inc.	Joseph Nir
Friction Material Company, Inc.	Robert Scott
Frictiontech Inc.	Andy Gagnon, President
Heavy Duty Friction (PMI) Echlin	Paul Myers
HKM Friction, Inc.	Ronald Randall, Treasurer
New Jersey American	Michael Carmolingo
Reddaway Manufacturing Co., Inc.	Todd Walker
Superior Friction, Inc.	Patrick Healey
TEK-Motive, Inc.	Ronald R. Moalli
Universal Friction Composites	Doreen Tomao, Vice President
U.S. Automotive Manufacturing, Inc.	Martin Chevalier
Vaapco, Inc.	Richard M. Cross
Wheeling Brake Block	Lee Burgess

ACTIVE MEMBERS - PROXIES TENDERED	PROXY FROM
Carlisle Corporation (To W. Wood)	W. Kinsey
CECO Friction (To G. N. Laycock)	D. Ted Shumate
Morse Automotive (To W. Britland)	Peter Morse
S. K. Wellman (To G. N. Laycock)	Fred A. Kowalcyk
Total Brake Industries (To G. N. Laycock)	Alex Tabori

OTHERS PRESENT	
Acro Gasket	Gerry Roy
APRA Technical Service	Mark Kothe
EIS Brake Parts	Sean McVey
Faster Inc.	Alberto Kahan
Faster Inc.	Sergio Kahan
Fibro Friction, Inc.	Neil Gethin
Friccion SA	Francisco Rangel
Frictiontech Inc.	Bob Beaupre
Friction Material Company, Inc.	Doug Watkins
HKM Friction, Inc.	Ron Featherly
ITT Automotive	Mohammad Vakili
Nucap Industries, Inc.	Ray Lizewski
Nucap Industries, Inc.	David Weichenberg
Reddaway Manufacturing Co., Inc.	F. William Barton

OTHERS PRESENT

Sachs-Boge of America	Bill Vernier
Safety Consultant	Arne Anderson
TEK-Motive, Inc.	Richard Moalli
Wheeling Brake Block	Rob Burgess
Wheeling Brake Block	B.L. Burgess
Morehouse Harlow & Weldy Attorneys at Law	Thomas P. Weldy
Friction Materials Standards Institute	Lori Dinihanian
Friction Materials Standards Institute	Gilbert N. Laycock, Secretary

Mr. Andy Gagnon, President, called the meeting to order at 8:35 A.M. June 11, 1995. As the first order of business, the President called for a roll call.

MINUTES OF PREVIOUS MEETING

The Secretary advised that minutes of the Membership Meeting of June 5-6, 1994 had been distributed. The President suggested that a reading of the minutes be dispensed with, as no corrections had been suggested.

Upon motion duly made, seconded and unanimously passed, it was:

RESOLVED: To accept the minutes of the Membership Meeting of June 5-6, 1994 as written.

PRESIDENT'S REPORT

Mr. Andy Gagnon, President, delivered his report. Please refer to EXHIBIT 1 in the report booklet.

Upon motion duly made, seconded and unanimously passed, it was:

RESOLVED: To accept the President's Report as written.

REPORT ON BOARD OF DIRECTORS ACTIVITIES

The Secretary summarized the activities of the Board of Directors transacted during the past fiscal year with mail ballots and primarily consisted of Membership additions and terminations.

Summarized as follows:

Approved Membership Applications:

Regional: Kuk Dong Brake Industrial Co. Ltd., Pusan, Korea
FMU Limited, Hartlepool, Cleveland, England
Leling Gold Phoenix Brake Pads Co., Ltd., Leling City, China

Licensee: Nucap Industries, Scarborough, Ontario, Canada

REPORT ON BOARD OF DIRECTORS ACTIVITIES (con't)

Terminated Membership:

Active: Ultra Brake, Inc., Sanford, Florida

The Board voted to recommend approval of the proposed expense budget for 1995-96 fiscal year and recommended revisions in the fee structure which will be presented as part of the Fee Formula Committee Report. Membership category revision with respect to shoe and plate manufacturers was considered but will require full Membership ballot as a Constitution revision is involved. The Board approved an expenditure for additional computer hardware, software and peripherals. They also discussed a conflict with the Constitution and Board Membership caused by company acquisitions and recommended that the Constitution be revised, again involving a Membership mail ballot.

Upon motion duly made, seconded and unanimously passed, it was:

RESOLVED: To accept the report on the Board of Director's Activities as read.

MEMBERSHIP COMMITTEE

Ms. Doreen Tomao, Chairperson of the Membership Committee, presented this report. Please refer to EXHIBIT 2 in the report booklet.

Ms. Tomao noted in her report that the Institute had 91 affiliates, down one from June 1994. Active Members lost two to 34. Due to a loss of one member and consolidation of two Memberships in to one, Regional Members stayed at 31 with a gain of two new members and a loss of two members. Licensee Membership increased one to 26.

However, at the Board of Directors Meeting on June 10, one additional Regional Membership was approved bringing the total affiliates up to 92.

Upon motion duly made, seconded and unanimously passed, it was:

RESOLVED: To accept the Membership Committee Report as written.

TREASURER'S REPORT

Mr. Ron Randall, Treasurer, presented this report. Please refer to EXHIBIT 3 in the report booklet.

The Treasurer's Report projected an excess of total income over expense, or profit, of $21,461. This was primarily due to income from the dissolution of the Institute's Trust fbo Harriet G. Duschek. The operating income was projected to be $171,976 with expenses projected at $182,542, Investment Income of $12,442 and the one time income from the Duschek Trust of $19,585. The report

TREASURER'S REPORT (con't)

analyzed expense variances which were over $400 from budgeted expense. There were six variances of $400 or more, five were favorable and one was unfavorable. The report included a Balance Sheet Projected to June 30, 1995, a Statement of Income and Expenses Projected for the 1994-95 Fiscal Year, a Seven Year Financial Summary and a Chart of Income vs Expense by Month.

Upon motion duly made, seconded and unanimously passed, it was:

RESOLVED: To accept the Treasurer's Report as written.

INVESTMENT ADVISORY COMMITTEE REPORT

Ms. Doreen Tomao, Chairperson, presented the Investment Advisory Committee Report. Please refer to EXHIBIT 4 in the report booklet.

Ms. Tomao advised that the total investment assets projected to June 30, 1995 were $259,028 versus $232,386 at June 30, 1994. Current yields on U.S. Treasury Notes average 5.1%, up from 4.7% last year and Money Market yields are 5.3%, up from less than 3% last year. She reported that the effect of low yields on U.S. Treasury Notes purchased in 1992 and 1993 will be felt for some time to come. The report also included a summary of the Institute's position in U.S. Treasury Notes.

Upon motion duly made, seconded and unanimously passed, it was:

RESOLVED: To accept the Investment Advisory Committee Report as written.

A member questioned the capital loss projected for 1995-96. The Secretary explained that the loss was caused by purchasing U.S. Treasury Notes at a premium due to yields being less than the interest rate on the notes. When the notes come to maturity, the premium charge becomes a capital loss.

BUDGET COMMITTEE

Mr. Martin Chevalier presented the Budget Committee Report. Please refer to EXHIBIT 5 in the report booklet.

Mr. Chevalier reported that the Committee proposed an Expense Budget of $192,425 for the 1995-96 fiscal year. This is an increase of 5.4% over the projected expenses for the year ending June 30, 1995. His report noted that the salary amount was indexed for budget purposes but any salary increments are determined by the Board of Directors. Line items that were increased were: Payroll Taxes, Pension, Insurance and Services and Repairs. Line items that showed no change were: Legal, Meeting Expense, State Property Tax and all Travel Categories. Line items that showed a reduction were: Audit and Depreciation. Rent and Utility Expense were unchanged but combined under Rent. Utility Expense category was eliminated.

Upon motion duly made, seconded and unanimously passed, it was:

RESOLVED: To accept the Budget Committee Report as written.

NOMINATING COMMITTEE REPORT

Mr. Ron Moalli delivered this report. There is no written report for the Nominating Committee.

The Board of Directors has five positions which expire this year. They are:

Martin Chevalier	-	U.S. Automotive Manufacturing
Ronald Moalli	-	TEK-Motive Inc.
Paul Myers	-	Heavy Duty Friction Group
Robert Scott	-	Friction Material Company
William Wood	-	Motion Control Industries

There are four Directors whose terms run to June 1996. They are:

William Aymond	-	Wagner Brake
Walter Britland	-	Abex Corporation
Ron Randall	-	HKM Friction, Inc.
Doreen Tomao	-	Universal Friction Composites

Mr. Moalli discussed the Constitutionally mandated balance of the Board which must be maintained with respect to the mix of large (multi-category) and small (single category) manufacturers. This is made particularly difficult when one factors in that, to be considered for the Board, one must attend meetings.

The recommendation of the Nominating Committee for five Directors to serve a two year term until June 30, 1997, were:

Martin Chevalier	-	U.S. Automotive Manufacturing
Ronald Moalli	-	TEK-Motive Inc.
Paul Myers	-	Heavy Duty Friction Group
Robert Scott	-	Friction Material Company
William Wood	-	Motion Control Industries

The President asked if there were any nominations from the floor. There were no nominations from the floor.

Upon motion duly made, seconded and unanimously passed, it was:

RESOLVED: That nominations for the Board of Directors be closed.

The Secretary was directed to cast one ballot for the election of Mr. Chevalier, Mr. Moalli, Mr. Myers, Mr. Scott and Mr. Wood to serve two-year terms until June 1997. The Secretary advised that the ballot had been so cast. The Secretary advised that with the election of these five Directors, the Board had the required nine Members.

FEE FORMULA COMMITTEE REPORT

Mr. Larry Mintman, Chairman of the Fee Formula Committee, presented this report. Please refer to EXHIBIT 6 in the report booklet.

Mr. Mintman noted that the only change in the fee structure since 1987 was an increase of $100 to all basic fee categories in 1993.

His report reviewed the Fee Structure and Income Projection for

FEE FORMULA COMMITTEE REPORT (con't)

1995-96. The projection for fiscal year 1994-95 shows a surplus or profit of $21,461 due mostly to one-time income from the Duschek Trust dissolution. The projection for fiscal year 1995-96 shows a loss of $24,641. Applying the 1991 guidelines to the three year average of Revenue over Expense for the years ending June 1995 and June 1996, including the Duschek Trust Income, no change in fee is recommended for 1995-96 and an increase is recommended for 1996-97. However, the report states that if the income for the Duschek Trust is removed from the calculation, a fee increase is recommended for the years 1995-96 and 1996-97. The report further recommends that, for future projections, an estimate of income from catalog sales be included in the projection for the next fiscal year.

Upon motion duly made, seconded and unanimously passed, it was:

RESOLVED: To accept the Fee Formula Committee Report as written.

The Fee Formula Committee, based on discussions which took place at the Board of Directors Meeting on 6/10/95, recommended a $100 increase in the basic fee paid by Active and Regional Members and a $300 increase in the fees paid by Members in the Licensee Membership category.

Upon motion duly made, seconded and unanimously passed, it was:

RESOLVED: To increase the basic fee paid by Active and Regional Members by $100 to $1800 and increase the Licensee Member fees by $300 to $1,000 for the 1995-96 fiscal year.

ANNUAL MEETING COMMITTEE REPORT

Mr. Ron Randall, Chairman, presented this report.

Based on discussions at the Board of Directors Meeting on 6/10/95, Mr. Randall changed his recommendation from Rancho Bernardo as noted in the report booklet to Loews Coronado Bay Resort. He presented a review of awards received by and amenities offered by Loews Coronado Bay Resort. The basic room rate is $145 per night.

Upon motion duly made, seconded and unanimously passed, it was:

RESOLVED: To accept the Annual Meeting Committee Report as written.

HEALTH AND ENVIRONMENTAL AFFAIRS COMMITTEE

Mr. Mohammad Vakili presented this report. Please refer to EXHIBIT 9 in the report booklet.

Mr. Vakili acknowledged the input and assistance received from the Department of Justice, EPA, OSHA and the PPG Health and Safety Department. Also, special thanks to Mr. Richard Moalli of TEK-Motive for his input over the year.

HEALTH AND ENVIRONMENTAL AFFAIRS COMMITTEE (con't)

The report, prepared by Mr. Mohammad Vakili, gave an update on asbestos with respect to the Occupational Safety and Health Administration (OSHA) final rule published on August 10, 1994, regarding Permissible Exposure Limit (PEL) and cleansing methods for brake and clutch repair. Mr. Vakili reported on the Environmental Protection Agency's (EPA) attempt to obtain a voluntary agreement (to stop using asbestos) from original equipment manufacturers and thus require the aftermarket to justify the use of asbestos in friction material under a Significant New Use Rule (SNUR). He also reviewed the Automotive Parts Rebuilders Association (APRA) work in asking manufacturers to identify fiber content of friction materials. The report also discussed the increasing scrutiny being received by fiberglass as a possible carcinogen.

Upon motion duly made, seconded and unanimously passed, it was:

RESOLVED: To accept the Health and Environmental Affairs Committee Report as written.

The request to identify assemblies with respect to fiber content as asbestos or non-asbestos with markings that would survive and be legible throughout the life of the part was discussed. The intent of this request is to be able to identify the material composition for proper handling if the part is rebuildable and for proper disposal when the disposal takes place. Disc brake are not rebuilt so disposal takes place after removal from vehicle. Clutch assemblies and drum brakes (both automotive and heavy duty truck) are rebuilt and lining disposal takes place after it has been separated from its core. It was noted that some manufacturers have added notches to the O.D. or I.D. of clutch facings for identification, however, tests have revealed that notches significantly reduce the burst strength of facings. As a majority of U.S. manufacturers have switched to non-asbestos, there were concerns expressed that many rebuilders shop for price and that domestic and imported asbestos material suppliers should bear the burden of identifying their material, as asbestos materials are generally less expensive than non-asbestos materials. A number of members noted that it is probably necessary to mark all materials because the material now in commerce is not marked and if it is not marked it is assumed to be asbestos. No definitive conclusions were reached but it was decided that the previously established committee to study material identification continue to work. The Committee is chaired by Doreen Tomao with members Robert Scott, Ron Moalli, Bill Vernier, Martin Chevalier and Bill Wood.

GUEST SPEAKER MR. ARNE ANDERSON

Mr. Andersons' talk was entitled Brake Lining, Risks, Cost and Technical Performance. He classified costs as consisting of two types of cost; economic value and societal cost side. Accidents and health risks are the societal costs and the economic value is represented by the actual cost of manufacturing. On the technical performance side there used to be only a single fiber as the basis

GUEST SPEAKER MR. ARNE ANDERSON (con't)

for friction materials which was chrysotile asbestos. Currently hundreds of different fibers have been tried with a couple of dozen finding wide usage. The automotive market for brake linings is about a one billion dollar market and industrial, off-highway, aircraft, railroad and appliance market for friction materials are just as large as the automotive market.

Looking at societal costs, of the 45,000 annual highway accident deaths, 0.9 - 1% are attributable to brake lining. There are about 5 million hospital treatable injuries due to auto accidents at a cost of $128 billion. Applying the 1% attributable to brake lining the cost is approximately $1.3 billion. In terms of risk there is a much bigger issue involved due to perceived risk as opposed to a true risk. The risk assessment study done on glass fibers grouped mineral wool and rock wool in with glass and studied fibers 100 times smaller than those fibers used in brake lining. It also studied fibers which were high in alumina whereas the fibers used in brake lining are primarily soda lime materials low in alumina content. The materials studied are less than 1% of production but represent 99+% of risk. The glassy type materials will, if judged by the perceived and incorrect risk, be treated as the asbestos materials. The only people to gain from this type of assessment would be environmental extremists and attorneys. Materials such as refractory ceramic fibers, phosphate fibers and titanate fibers are known to be far more dangerous than asbestos but are being used in brake lining sold as non-asbestos.

In terms of performance tests in the European market a test for linings was established but was put on hold because the O.E. linings could not pass the test. In Japan, 99% of the replacement linings are sold through O.E. distribution. In the U.S. we are known for an open and free market. Some sort a performance standard using a dynamometer would be beneficial. One engineering firm doing dynamometer testing is monitoring the wear of its friction material products for its own protection. There are three types of fibers which are of concern in manufacturing and from the products of their use. They are: refractory ceramic fibers, titanate fibers and phosphate fibers.

BRAKE PERFORMANCE STUDY COMMITTEE REPORT

Mr. William Wood, Chairman, delivered the Brake Performance Study Committee Report concerning heavy duty applications. Please refer to EXHIBIT 7 in the report booklet.

Mr. Wood's report noted the work done by the Maintenance Council of the American Trucking Association (ATA) concerning compliance to FMVSS 121 with their recommended Practice 628. He also noted that SAE J1802 was being reviewed at the SAE Brake Committee Meetings as his report was being written.

A report was prepared by Mr. Mohammad Vakili with respect to the passenger car disc brake SAE J1652 Test Procedure and drum brake SAE J1653 Test Procedure. He noted that workshops will be held at the SAE Brake Colloquium in October. The report also noted the

BRAKE PERFORMANCE STUDY COMMITTEE REPORT (con't)

Final Rule Published in the Federal Register, February 2, 1995, concerning FMVSS 135 which goes into effect in September, 2000.

Upon motion duly made, seconded and unanimously passed, it was:

RESOLVED: To accept the Brake Performance Study Committee Report as written.

A member expressed concerns about the anticipated requirement to have multiple tests run on a number of different brakes by independent testing laboratories and the cost impact on the smaller manufacturers. It was noted that to qualify for an edgecode, independent test laboratories are currently used and the test does not predict how the material will perform on a vehicle. The J1652 and J1653 tests are a step closer to predicting performance on a vehicle and it was suggested that members who have concerns about the test should become part of the process which is creating the tests. It was expressed that there is mounting pressure to move away from the chase dynamometer for testing and to a representative full scale brake (exemplar brake) or brakes which are representative of the various loadings and configurations (non-servo, duo-servo, etc.) encountered on vehicles. There was a question concerning off-highway or industrial applications and it was noted that comparable testing for this market segment is unlikely at this time.

DATA BOOK AND TECHNICAL COMMITTEE REPORT

Mr. Don Delvy, Chairman, presented this report. Please refer to EXHIBIT 8 in the report booklet.

Mr. Delvy's report reviewed the changes in the Committee Roster and noted that although the Committee did not meet during the year, Committee decisions were handled by mail ballot. His report noted that 121 new assignments were made during the year and detailed the breakdown by category. Bulletins published were noted as well as catalog information. The report acknowledged the contributors of new identities and carry-over information.

Upon motion duly made, seconded and unanimously passed, it was:

RESOLVED: To accept the report of the Data Book and Technical Committee as written.

INSTITUTE PENSION PLANS

The Secretary reported on the Institute Pension Plans. Please refer to EXHIBIT 10 in the report booklet.

The Secretary reported that there were two plans in effect. The Simplified Employee Pension Plan (SEPP) for current employees contributes 15% of eligible employees salaries to the employees IRA and a pension trust established by the Institute for benefit of Harriet G. Duschek. Miss Duschek died December 22, 1994 at age 88. In the fifteen years of operation of this trust from January 1, 1980 to December 31, 1994, the trust paid Miss Duschek at total of $99,000. The trust balance as of December 31, 1994 was $19,565. The initial funding of the trust was $55,000 giving a net invasion

INSTITUTE PENSION PLANS (con't)

of principal of $35,435. The trust agreement specifies that upon the death of Miss Duschek all assets revert back to the Institute.

Upon motion duly made, seconded and unanimously passed, it was:

RESOLVED: To accept the report on Institute Pension Plans as written.

INTRODUCTION OF OFFICERS

Mr. Gagnon introduced to the Membership the new Officers to serve for the forthcoming year. They are:

President	-	Mr. Andy Gagnon
Vice President	-	Ms. Doreen Tomao
Treasurer	-	Mr. Ron Randall
Secretary	-	Mr. Gil Laycock

OTHER NEW BUSINESS

A proposal formulated at the Board of Directors Meeting was presented to the Membership by Ron Moalli. The proposal was to change the membership classification of those manufacturers who make brake shoes and disc plates from Licensee to Active Member. It was noted that, with only a few exceptions, the aftermarket suppliers of brake lining sets for automotive applications use the shoe or plate as their part number. The shoe and plate manufacturers are an integral part of the automotive friction material business. The change to Active Member status for shoe and plate manufacturers would allow them to become Directors of the Institute, to be Officers of the Institute and give them a vote in the operation of the Institute. Hopefully, this change would expand their participation in the operation of the Institute.

Upon motion duly made, seconded and unanimously passed, it was:

RESOLVED: To proceed with the Constitution revision to revise the Active Membership Category to include disc plate and brake shoe manufacturers.

The Secretary noted that a Constitution revision requires a two-thirds majority of the Membership and that this will be done by mail ballot.

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There being no other business brought to the attention of the Membership, upon motion duly made, seconded and unanimously passed, it was:

RESOLVED: To adjourn

Adjourned at 10:00 A.M. June 12, 1995

G. N. Laycock
Secretary