MINUTES OF MEETING

OF THE

BOARD OF DIRECTORS

Saturday, June 6, 1992

La Quinta Hotel and Resort

La Quinta, California

DIRECTORS PRESENT

Robert E. Nelson	Abex Corporation - Friction Products Group
Rita Grisham, Vice President	Ferodo America, Inc.
Andrew Gagnon	Frictiontech Inc.
Ron Randall	HKM of California, Corporation
Douglas Willsie	ITT Automotive Parts Supply Division
William Wood	Motion Control Industries
Doreen Tomao	Raymark Friction Company
F. William Barton	Reddaway Manufacturing Company
Ronald Moalli	TEK-Motive, Inc.

OTHERS PRESENT

Larry Mintman, President	Allied Signal Friction Materials North America
Edward Eggert, Treasurer	Reddaway Manufacturing Company
Thomas P. Weldy, Counsel	Payne, Morehouse, Shafer & Harlow Attorneys at Law
Lori Dinihanian	Friction Materials Standards Institute
Gilbert N. Laycock	Friction Materials Standards Institute

Mr. Mintman, President, called the meeting to order at 8:35 A.M.

MINUTES OF PREVIOUS MEETING

The Secretary advised that minutes of the Board of Directors Meeting of June 10, 1991 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 approved, it was:

RESOLVED: To accept the minutes of the meeting of the Board of Directors of June 10, 1991 as written.

FMSI 00911

FMSI--0478

PRESIDENT'S REPORT

Larry Mintman, President, delivered his report. Please refer to EXHIBIT 1 in the report booklet.

Mr. Mintman commended Mr. Ron Randall for his diligence and attention to annual meeting site selection and requested comments concerning the revision of meeting schedule to take advantage of over weekend air fares and reduce time out of office. Changes in membership were reviewed. The financial condition was noted as being sound and final closure of the books on the Paramus, New Jersey office was covered. Mr. Mintman commented on the positive effect of the Institute's computer and software has had on catalog production and cost, by producing a larger catalog with reduced volume at the same cost as the 1990 catalog. New assignments and the work of the Data Book and Technical Committee were noted. Mr. Robert J. Pigg of the Asbestos Information Association North America was acknowledged as a guest speaker at the Annual Membership Meeting. The retirement of Mr. Don Emrick of Delco Chassis Division, a long time delegate and friend of the Institute, was noted with good wishes from the Institute. Mr. Mintman thanked all those who participated and contributed to the continued growth and stability of the Institute.

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

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

Mr. Mintman introduced Ms. Lori Dinihanian to the Board of Directors. It was felt that due to the record turnout, Lori's presence could take some of the load off of Gil Laycock by helping greet members at the various receptions.

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 that the Institute now has 88 affiliates down from 89 in June 1991, with Active Members decreasing from 37 to 34, Regional Members increasing from 29 to 30 and Licensee Members increasing from 23 to 24. The report details the specific Membership additions, consolidations and losses.

Ms. Tomao acknowledged the contributions of Mr. Don Emrick of Delco Chassis Division as a member of the Membership Committee and to the Institute and wished him well in his retirement.

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

RESOLVED: To accept the Membership Committee Report as written.

MEMBERSHIP REPORT - (con't)

Report on Delinquent Fees - Oral - G. Laycock

The total for open invoices for fee billings as of June 1, 1992, was $12,525. The amounts owed by quarters are:

1st Quarter 1991-92 FY	$1,387.50
2nd Quarter 1991-92 FY	462.50
3rd Quarter 1991-92 FY	4,287.50
4th Quarter 1991-92 FY	6,387.50

Two members have open invoices going back to July 1, 1991 and have not responded to dunning letters. Services to these members were terminated as of 4/1/92. They are:

Active Member - Fox Friction Mfg, Inc., Mississauga,Ontario, Canada
Regional Member - Duramax SA de CV, Tlalnepantla, Mexico

During past years it was noted that delinquent members were given additional time up to three months in which to pay past due invoices, at which time if no payment had been received their names were submitted to the Board for termination. It was suggested that 3 months was being too lenient in light of the fact that they were already one year behind in their payments. It was suggested that this final notice include the fact that termination of membership rescinds the permission to use FMSI copyrighted part number and FMSI registered trademarks.

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

RESOLVED: To notify the delinquent members that they have 30 days to pay past invoices. If no payment is received their names will be submitted to the Board of Directors for termination of membership and that termination of membership rescinds the permission for their use of the copyrighted FMSI part number system.

It was also noted that the U.S. customs could stop shipments coming into the United States if the company shipping to the U. S. were in violations of U.S. copyright laws.

A discussion followed concerning memberships exporting to the U.S. market particularly in light of the multi-national conglomerate which may have a U.S. Active Membership but may also have friction material manufacturing divisions outside of the U.S. who are not members of FMSI. The non-member could export to the U.S. member and the U.S. member could sell product using the FMSI designations. It was noted that wholly owned subsidiaries are separate legal entities. With what has been seen in the past year concerning consolidation of membership the Institute lost 3 dues paying members due to consolidations or restructuring of companies. It was suggested that the Membership Committee and/or legal counsel

MEMBERSHIP REPORT - (con't)

look at membership criteria under consolidations or conglomerate umbrellas. Any restructuring of membership categories should have as one of its goals a way of increasing income to the Institute while the members are decreasing. Another suggestion was to look into worldwide registration of our copyright, or the best we could do. It was suggested that we develop a data base of our members and the names under which they are trading.

TREASURER'S REPORT

Mr. Ed Eggert, Treasurer, presented this report. Please refer to EXHIBIT 3 in the report booklet.

The report projected an excess of total income over expenses of $5,738. Operating income is projected to be $973 less than budgeted income due to membership consolidations and losses. There were a number of variances from budget. The largest single variance was a favorable variance in postage expense. This was due to a reduction in the number of bulletins mailed. All variances greater than $400 are detailed in the report. The report included a Balance Sheet projected for June 30, 1992, a Statement of Income and Expenses for the 1991-92 Fiscal Year and a Seven Year Financial Summary.

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

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

INVESTMENT ADVISORY COMMITTEE REPORT

Mr. Ed Eggert, Chairman, presented the Investment Advisory Committee report. Please refer to EXHIBIT 4 in the report booklet.

Mr. Eggert advised that the total investment assets projected to June 30, 1992 were $250,995 versus $241,759 at June 30, 1991. Current yields of Treasury Notes average slightly over 7% and Money Market yields less than 4%. Interest rates continue to be low and roll-overs on Treasury Notes will continue to reduce the overall average yield. The effect of these low interest rates will be felt for some years 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.

BUDGET COMMITTEE

Mr. Ron Randall, Chairman, presented the Budget Committee Report. Please refer to EXHIBIT 5 in the report booklet.

The Committee proposed an Expense Budget of $163,940 for the 1992-93 fiscal year. This is an increase of approximately 5% over the expense budget for the year ending. The major portion of the increase is reflected in salaries which are approved by the Board of Directors. Other individual or grouped line items showed small or no change from the prior year's budget. Unchanged were: Rent, Professional Services, Meeting Expense, Meeting Travel and Depreciation. Those items showing increases were: Insurance Expense Payroll Taxes, Pension Expense, General Travel Expense and Utilities Expense. The single item showing a decrease was: Office Expenses. A new line item was added for State Property Tax.

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

RESOLVED: To accept the Budget Committee Report as written.

The secretary presented a list of office equipment "wants" some of which were replacement items of very old furniture. The list included:

	Estimated Cost
8 - 4 drawer file cabinets	$1,200
3 - Secretarial chairs	450
1 - Dot Matrix continuous feed wide carriage return	850

After discussing the relative merits of Laser vs Dot Matrix Printers:

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

RESOLVED: The Board of Directors authorizes the purchase of office equipment not to exceed $3,000.

FEE FORMULA COMMITTEE REPORT

Mr. Robert E. Nelson, Chairman of the Fee Formula Committee, presented this report. Please refer to EXHIBIT 6 in the report booklet.

Mr. Nelson noted that there have been no changes in fees since the fee structure which was revised in 1987. The income from Membership Dues using the existing fee structure was projected to be $146,800. The proposed expense budget is $163,940 giving a net loss of $17,140 comparing operating income to operating expenses. The projected investment income of $15,505 reduces this net loss to $1,635. Using the guidelines established in 1991, the Fee Formula Committee recommended that the fee structure remain unchanged for the coming year.

FEE FORMULA COMMITTEE REPORT (con't)

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

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

RESOLVED: The Board of Directors recommend to the Membership that the fee structure for the next fiscal year remain the same as last year.

A question was raised concerning the category "Regional Association". The Regional Associations were established for friction manufacturers outside of the U.S. such as British Friction Materials Council and Canadian FMSI. Membership in these associations allows the use of FMSI numbers outside of the U.S. market. However, if any member of a regional association wishes to export to the U.S.market they must apply for Regional Membership and pay the same dues, by category, as an Active Member to be allowed the use of copyrighted catalog number system and FMSI registered trademarks within the U.S. market. It was suggested that the two regional associations be contacted for a listing of their members. It was noted that the board should draft a specific motion or establish a committee to review the Constitution concerning membership criteria.

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 are 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. The trust pays Ms. Duschek $550 monthly and as of December 31, 1991, has assets of $35,962. It was noted that since 1980 the trust has paid Ms. Duschek $79,200 and still has 65% of the principal remaining.

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

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

HISTORICAL SALES REPORTING

The Secretary reported on the Historical Sales Program for the past year. Please refer to EXHIBIT 11 in the report booklet.

The report covered the activities of the Historical Sales Statistics Program for the calendar year 1991. It was reported that a total of twenty two members reported sales statistics for the final quarter full year report, this is down from 23 in

HISTORICAL SALES REPORTING (con't)

December 1990. A Ten Year Rolling Summary 1982-1991 was distributed to all members who reported during the final quarter. It was noted that for the 4th quarter 1991, 14 companies reported drum brake lining information, 7 companies reported brake block information, 16 companies reported disc brake information and 5 companies reported clutch facing information.

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

> RESOLVED: To accept the report on Historical Sales Reporting as written.

ANNUAL MEETING COMMITTEE REPORT

Mr. Ron Randall, Chairman, presented this report. Please refer to EXHIBIT 12 in the report booklet.

The Committee recommended Longboat Key Club in Longboat Key, Florida on the Gulf coast. It is 8 miles from Sarasota/Bradenton Airport or 70 miles from Tampa International Airport. The resort has 45 holes of championship golf, 38 tennis courts and miles of beaches as well as other amenities. Each unit is a condo unit. There are three restaurants on site and shipping at St. Armands Circle with over 100 specialty shops.

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

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

BRAKE PERFORMANCE STUDY COMMITTEE REPORT

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

Mr. Wood presented an update of the status of SAE J1801 and SAE J1802 procedures for heavy duty block. The SAE J1801 marking procedure has been approved and the J1802 procedure is still undergoing comparative testing but he believes that the procedure for testing will be approved. After approval of the procedure guidelines must be established for the use of the data generated. The progress of the passenger car group was also reviewed.

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

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

A general discussion followed concerning the heavy duty and passenger car versions of the SAE J1801/J1802 test and marking procedures. The heavy duty testing is much farther along than the

BRAKE PERFORMANCE STUDY COMMITTEE REPORT (con't)

passenger car work. It was noted that eventually this will be a NHTSA regulation for both heavy duty and passenger car. The heavy duty marking procedure has been approved. It will be an embossed marking on one side of a block. The testing for heavy duty will be on a Rockwell "S" cam brake with a FMSI 4515 block. At this time the only testing that has gone on, has been with a fixed set of conditions eg: a fixed rolling radius, a single wheel load and using a cast shoe to eliminate variability and verify that the procedure is reproducible at various locations. Eventually the other variables will be added. Concerns were expressed that people would use the coding established for brake block applications for friction materials in general usage such as they have with the current edgecode letters.

The House of Representatives Bill H.R. 1790 - "Design Innovation and Technology Act of 1991" was also discussed. The bill would give "design protection" similar to a patent to the designer of a part for a 10 year period. This would in essence eliminate all aftermarket business opportunities for a period of 10 years after design release. The scope of the bill is wide protecting almost every type of product.

The inquiries received by a few friction material manufacturers from the National Highway Traffic and Safety Administration (NHTSA) was discussed. The NHTSA inquiry requested information on product defect complaints resulting in accident sine June 1 of 1991. It also contained a series of tests conducted by NHTSA where in some instances low friction front brakes were combined with high friction rear brakes apparently in an effort to create an unstable brake combination with rear lockup. The abstract from the NHTSA technical documentation page states: "This study was conducted to determine the effect on braking performance of light vehicles of installing aftermarket brake linings." After discussing the various tests run on rented vehicles (Phase I) as well as instrumented vehicles with various aftermarket linings (Phase II) their conclusion was: "There are aftermarket linings in the market that degrade braking efficiency, cause the rear wheels to lock before the fronts and reduce fade resistance below the O.E. level."

One Board member commented that their method of testing was flawed. However, flawed or not, their tests could be used to justify legislation that would put considerable burdens on the aftermarket friction material manufacturers. It was noted that the problem would go away on new vehicles with 4 wheel disc systems with ABS which will probably be the standard in a few years. One member commented that the expected vehicle life is 10 - 12 years. It was noted that some states such as California and New Jersey are proposing buy back programs for vehicles over 7 years old to reduce vehicle emission by getting rid of those cars which contribute most to air pollution.

An opinion was expressed that NHTSA really does not have good solid testing or complaint data but by publishing the data that they have

BRAKE PERFORMANCE STUDY COMMITTEE REPORT (con't)

to selected companies in the industry and having them comment on the testing as well as listing product complaints, the industry will be providing data on testing as well as complaint data which could be used as ammunition against the industry. One member commented on the general inquiries made by EPA prior to the legislation being enacted banning asbestos.

DATA BOOK AND TECHNICAL COMMITTEE REPORT

Mr. Doug Willsie, Chairman, presented this report. Please refer to EXHIBIT 8 in the report booklet.

Mr. Willsie noted the roster revisions of the Committee during the past year and presented the current roster of the Committee. There was one meeting of the committee during the past year which took place in Pittsburgh, PA. There were 100 additions to the automotive disc and drum linings and shoes. There were no additions for brake blocks and clutch. Committee actions noted were: produce full catalog every year eliminating the odd year supplement; lining and shoe bulletins were consolidated to one and will be color coded to match current catalog; fractional dimensions were converted to decimal in the lining section except for bolt and rivet sizes; old identities were added back to catalog with the reference to the catalog year in which they last appeared as far back as the 1984 catalog; parking brake shoes were added to illustration section; generate an updated Brake Block I.D. Supplement to cover new additions (still have 2,000 I.D. books in inventory); continue work on HD shoe assignments; drop study for number system for motorcycle friction material; include all drawings for shoes in catalog regardless of volume; make new drum shoe assignments for drill pattern changes; drop project for determining O.E. non asbestos usage (project had become moot with the rescinding of EPA Asbestos Ban). Mr. Willsie acknowledged those who had contributed information for new assignments and requested continued support from all members of the Institute.

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

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

There was a general discussion concerning the method of obtaining new data, specifically as related to clutch facings, since the institute has little input from the O.E. clutch people, as most clutches are O.E. from offshore. It was also noted that a "mission statement" of what FMSI is and how it works should be included with all new applications for Membership. It should particularly stress that the information that the Institute publishes is from contributions from members.

A question was raised as to why the Institute no longer publishes a "Semi-Metallic" listing as it had in the past. Mr. Willsie

DATA BOOK AND TECHNICAL COMMITTEE REPORT (con't)

explained that there were a number of materials that fell in a grey area that were between "organic" and "semi-metallic" and that any review by the Data Book and Technical Committee generally ended with a split decision. Also, the membership felt that an arbitrary decision would lock them into supplying a particular type of material when the list was published. Material technology is constantly changing and the members should decide the material type for a given application based on performance. The membership voted in 1990 to stop publishing the "Semi-Metallic" list. In place of the "Semi-Metallic" list the Institute would publish the edgecode on the O.E. sample used for making any new assignment. Actually, the Institute searched through files and compiled a listing of all available FMSI to O.E. Part Number to Edgecode information.

Concerns were expressed about some of the FMSI members who modify the O.E. design of a part yet still use the same FMSI designation. Several members have noted that this has caused problems particularly if they have multiple sources for component parts.

HEALTH AND ENVIRONMENTAL AFFAIRS COMMITTEE

Ms. Rita Grisham, Chairperson, presented this report. Please refer to EXHIBIT 9 in the report booklet.

Ms. Grisham noted that there had been no meetings of the Health and Environmental Affairs Committee during the past year. The "Recommended Procedures" insert for the Automotive Data Book was updated for the 1992 Catalog taking into account the revocations of the EPA Ban on asbestos and incorporating current thinking about dust exposure in the workplace. Pending OSHA Legislation was reviewed. A partial summary of standards that apply to asbestos and non-asbestos manufacturing disposal and labeling was presented.

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

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

OTHER BUSINESS

RELEASE CATALOG DATA OR OTHER FMSI LOTUS 123 FILES ON ELECTRONIC MEDIA

A number of members had asked if FMSI Catalog files would be made available to members on a floppy disc as 98% of our catalog was given to the printer in the Lotus 123 Spread Sheet Format. Other files which are on Lotus 123 are a "Where Used" File, FMSI to O.E. P/N to Edgecode File and Cross Reference File. The general consensus was that the catalog was our largest asset and once released on a floppy disc it could be copied for less than a dollar.

RELEASE CATALOG DATA OR OTHER FMSI LOTUS 123 FILES ON ELECTRONIC MEDIA (con't)

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

RESOLVED: Institute Files will not be released on electronic media.

STATEMENT OF DISSOLUTION

The Institute Auditors, Marshall Granger and Company requested that the Institute prepare a "Statement of Dissolution" which is a formal listing of what happens to the assets of the Institute if it were to shut down. The document was prepared and reviewed by Institute Counsel. There were questions concerning, the impact of this document on the Tax Exempt Status of the Institute. In the opinion of the Institute Counsel this document would not affect the Tax Exempt Status of the Institute.

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

RESOLVED: To approve the "Statement of Dissolution" as written.

INDUSTRY STATEMENT

Marshall Granger and Company also requested that an "Industry Statement" be prepared. This statement is a formal description of who we are and what we do and will be incorporated into the disclosures in both financial statements and State and Federal Filings.

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

RESOLVED: To approve the "Industry Statement" as written.

CONSTITUTION REVIEW COMMITTEE

Mr. Mintman noted that during the Membership Committee and Fee Formula Committee Reports it became evident that a review of the Constitution is in order to insure that the Institute Constitution is in line with the current state of the industry. Some members are multinational corporations with more than one friction material manufacturing division. Also, we have experienced membership losses due to consolidations of membership with multi-division companies opting for a single membership. Mr. Mintman noted that since he is the outgoing President the Committee will be interfacing with Ms. Rita Grisham as the incoming President. He also noted that the basic committee should consist of the Fee Formula Committee and Membership Committee and other volunteers. Mr. Ed Eggert volunteered to serve on the committee.

CONSTITUTION REVIEW COMMITTEE (con't)

The basic purpose of the committee is to review the Constitution as it pertains to membership. There was general agreement that Tom Weldy should review the Constitution, pointing out areas which are potential problem areas concerning membership classification. He should submit his report to the Institute Secretary who will distribute the report to the Constitution Review Committee for their recommendation to be submitted to the Board of Directors and eventually to the membership.

DRESS CODE FOR RECEPTIONS

One or more of the Board Members suggested that jackets for gentlemen would be optional at the Directors Reception and the first Membership Reception.

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

RESOLVED: Jackets for gentlemen are optional at the Directors Reception and first Membership Reception and jackets for gentlemen are suggested for the Membership Reception and Dinner.

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

RESOLVED: To adjourn

Adjourned at 12:20 P.M.

G. N. Laycock
Secretary