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The Quarterly Newsletter of the Snell Memorial Foundation

This is the twenty-ninth of the Foundation's quarterly newsletters to the helmet manufacturing industry. The twenty-eighth was sent out last January. Comments and items for inclusion in subsequent issues are invited.

In This Issue

1. [Manufacturers' Meeting](#)
2. [FIA & FIM Helmet Meetings](#)
3. [TRL Standard & Super Helmet](#)
4. [FIM Helmet Concerns](#)
5. [Flip-Up Motorcycle Helmets](#)
6. [M2000/SA2000/K-98](#)
7. [DOT Revision](#)
8. [SMSA Meeting](#)
9. [Who to Contact at Snell](#)

Manufacturers' Meeting

There was a manufacturers meeting February 16, 2001, in downtown Indianapolis, Indiana, the Friday before the PowerSports Expo. Dr. Fenner, Randy McCarty and Ed Becker represented Snell at the meeting. One of the chief items of interest was a draft set of requirements for a new auto racing helmet standard developed by TRL, an English organization, under contract to FIA, the international auto racing authority.

This draft, and an associated “super helmet” are discussed further on in this issue.

FIA & FIM Helmet Meetings

There were separate meetings of the helmet working groups of both FIA and FIM in the first quarter of this year. Dr. Thomas of the Foundation’s board of directors and Ed Becker attended both these meetings. We are grateful to FIA and to FIM for the chance to participate in the discussions.

The FIA helmet group met in mid-January. The main item of discussion was a proposal for a new FIA helmet standard developed under contract by Transport Research Laboratory (TRL). The FIM meeting was held the last Friday of March. They are currently deal with an array of helmet standards and wish to simplify the burden this places upon their scrutineers as well as to improve race safety.

FIA and FIM set and administer rules and policies for broad ranges of racing competition. Ensuring the use of proper crash helmets is a small but important part of their responsibilities. The manufacturing and standards communities can and should provide all possible assistance to enable each racer to acquire and use headgear that can be easily demonstrated to meet the highest levels of protective capability.

TRL Standard & Super Helmet

At the FIA Helmets Working Group meeting, Andrew Mellor of TRL gave a presentation describing the proposed standard developed under contract to FIA and the methods by which the standard was developed.

TRL coupled their standards development effort to a helmet development effort. Essentially, they first sought to identify the best helmet possible and then set their standard’s helmet performance requirements to match. Thus, their effort lead to the development of a new helmet as well as a new standard. Mr. Mellor produced a sample of the helmet shell for the inspection of the other attendees and handed out copies of a summary of the features of the proposed standard vis-a-vis the Snell SA-95 requirements.

The proposal includes an extensive change to the impact test procedures. Instead of successive impacts from nominal heights of 3.0 meters and 2.2 meters, TRL proposes a single impacts in two different tests. One at a nominal drop height of 2.9 meters with a peak acceleration no greater than 250 g’s and the other from about 5.1 meters with a peak acceleration no greater than 275 g’s. TRL also proposes the BSI oblique impact test as well as a more severe shell penetration test.

The proposal represents a substantial increase in impact test severity over the current SA2000 standard. Although the two Snell impacts total to a severity comparable to a single 5.1 meter drop, the helmet recovers somewhat between impacts so that a simple sum of impact severities does not necessarily apply.

Snell has arrived at its current requirements by increments. For each successive standard, the directors review the capabilities of the currently certified headgear and redraw the requirements to favor those headgear that most meet the needs of their wearers. In so doing, the Foundation emphasizes those capabilities the directors consider most important but it is the state of the industry that sets the levels. We neither have nor claim the expertise to set levels for helmet performance directly. Instead, the Foundation relies on a mechanism by which the best in the industry set the levels that all must then meet.

TRL has chosen another, bolder route. Rather than rely on the best in the industry to lead the way to better headgear, they will teach the making of better helmets themselves. A prototype unit of the TRL design was introduced by Mr. Max Mosley of the FIA at a press conference on May 26, 2001 in Monte Carlo, Monaco and created quite a stir. FIA and TRL have made the plans for the new super helmet available to interested manufacturers in hopes that production units will soon become available to the racing community.

At first, these new super helmets will be tested to existing standards such as the Foundation's SA2000 requirements. Once the manufacturers and standards groups understand the capabilities of the new headgear, we will all be better able to move on to a consideration of the TRL proposals for the new racing helmet standard.

FIM Helmet Concerns

The FIM helmet working group will play close attention to developments in racing helmets and standards at FIA and TRL. However, in their March meeting they also expressed concerns over the complexities imposed by their current rules for helmet use.

FIM has traditionally admitted helmets satisfying any of a broad range of international and local standards. Safety inspectors have to recognize the labels and logos of many different homologations some of which, like our own, require a determined search inside the helmet. They have to contend with aftermarket modifications that might affect a headgear's protective capability. They may also have to contend with outright fraud such as stolen or counterfeit labels. FIM may seek to simplify the safety inspectors' tasks by reducing the number of standards accepted and by asking the standards organizations and manufacturers to adopt measures to control aftermarket modification and prevent fraud. It is expected that the first rule changes will apply to World Championship Events.

Flip-Up Motorcycle Helmets

The Foundation has received a barrage of questions concerning a particular style of motorcycle helmet. This configuration looks like a standard full face helmet but the front of the helmet is hinged to 'flip-up' and away from the wearer's face. Everyone, including our own staff, is impressed with the convenience of a full face helmet that facilitates drinking a cup of coffee, smoking a cigarette and conducting normal conversation all without removing one's hat. The flip-up style is especially convenient for anyone who wears glasses.

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o how come none of these flip-up helmets are Snell certified? The short answer is that none of the flip-up helmets are certified because none of their manufacturers has submitted them for testing. The Foundation is ready to accept submissions of flip-up style helmets and will hold them to all the same test requirements set for traditional full face headgear. The chin bar will be tested for rigidity, the face shield must withstand the pellet penetration tests and, of course, the helmet must provide all the impact protection we demand of every full face and open face motorcycle helmet. Drinking coffee and cleaning eyeglasses without removing a helmet is very appealing but the Foundation is not ready to give up any protective capability for the convenience.

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ow well will these flip-up helmets do in Snell testing? We won't know until we test them. My best guess is that the chin bar rigidity tests and the face shield penetrations tests will not represent any particular problems. Since most of the current flip-up headgear use standard chin straps and buckles and can be removed without lifting the face piece, I do not anticipate any retention test problems either. Impact testing may pose unique difficulties for this flip-up configuration but Snell impact testing poses difficulties for all motorcycle helmet configurations. In any case, the Foundation is not ready, now or ever, to trade off impact protection for convenience.

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he Foundation urges helmet manufacturers to design and build flip-up helmets to meet the M2000 standard and to submit samples for Snell certification. We hope that interested motorcyclists everywhere will contact helmet dealers and distributors with the same encouragement.

M2000/SA2000/K-98

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-98, M2000 and SA2000 Standard booklets are available on request. Due to it's newness, K-98 will be carried forward without a change in designation. However, the test line modification imposed for M2000 and SA2000 will also apply to subsequent K-98 requirements. The K-98, M2000 and SA2000 Standards along with most other Snell Standards are also available on the web site <www.smf.org>.

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hipments of M-95 and SA-95 certification labels stopped at the end of September but some M-95 and SA-95 labeled production might have continued through the end of March, 2001.

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ven though helmets certified to the new standards are now available, current M-95 and SA-95 helmets did not turn into pumpkins at midnight September 30. If anyone owns a good Snell '95 helmet that fits well and comfortably, there is no reason to run out helmet shopping right now.

DOT Revision

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he long awaited "Notice of Proposed Rule Making" introducing revisions to Federal Motor Vehicle Safety Standard 218 is now projected for the fall of this year. According to the Draft Motorcycle Safety Improvement Plan released for



comment by the National Highway Traffic Safety Administration, JUNE 2001: "NHTSA plans to propose rulemaking that includes: upgrading FMVSS 218's test procedure; higher impact attenuation test velocities; a helmet roll-off test to improve retention effectiveness; and extending the helmet test area. The agency is considering revising the standard's labeling requirement to strengthen the standard's enforcement effectiveness (e.g., to distinguish "fake" helmets from legitimate helmets). It may also harmonize the test requirements with other major international and national standards, where appropriate, for improving helmet performance based on safety need and for reducing helmet cost to consumers from more uniform helmet designs."

We will attempt to monitor developments in this matter through notices posted on the DOT, Federal Record and Commerce Business Daily web sites.



SMSA Meeting

Ms Hong Zhang, the Foundation's Director of Education is currently attending a meeting of the State Motorcycle Safety Administrators in Reno. These are the people who organize and conduct motorcycle ridership courses throughout the United States. Many of the attendees are course instructors. Quite a few of these teach motorcycling for little more reward than the pleasure of sharing a sport they love.

The value of ridership training is undeniable. New riders seem to get the equivalent of a six months' jump in experience from these courses without some of the attendant hard knocks that often befall neophytes. The jump is worthwhile because the first six months on a motorcycle are usually the riskiest period in a rider's career.

For many, these ridership courses also provide the first and most complete grounding in the selection and use of motorcycle safety accessories including helmets. Since most of the instructors wear their own gear for the field training, their personal choices will make lasting impressions. I doubt that any of the instructors would ever use or recommend gear unless they personally believed in it. But a marketer of good gear would do well to get a few units of his products into the hands of these instructors, whether through discount programs or donations to SMSA.

Currently, many of these ridership training programs have extensive waiting lists. They all need additional instructors and facilities to handle the demand. Since many operate on shoestring budgets I am sure that loans or outright gifts of gear, accessories or instructional materials would be welcomed. I urge all facets of the industry and Snell certified helmet manufacturers in particular to look into the SMSA and to support the efforts of this fine organization.

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