



The Newsletter of the Snell Foundation

HeadsUp In this issue...

Snell Reorganization.....	1
ECE R 22-06.....	1
M2020R.....	1
Rotational Testing.....	2
Snell Test Methods and Equipment.....	2
Snell Ambassadors Program.....	2
Online Tours and Presentations.....	2
Contacting Snell.....	2

This is the 75th of the Foundation's newsletters to the helmet manufacturing industry. The 74th went out at the end of last May. Comments and items for inclusion in subsequent issues are invited.

Snell Reorganization

After thirty plus years on the Snell staff, Edward Becker is stepping down. Stephen Johnson and Denis Anishchenko, both experienced Snell hands, will see to the continuity of the Snell lab and office operations and to a smooth transition. Mr. Johnson has become Snell's executive director and Mr. Anishchenko has assumed the engineering and scientific functions.

Mr. Johnson began work with the Foundation in the late 1980's as a test technician. He managed the laboratory on Long Island, New York, before coming out to California as our general manager. When Mr. Brown retired Steve took over managing the laboratory here in California.

Mr. Anishchenko joined us in 2001 as an IT consultant but stayed on exercising his mathematical and analytical training as our research engineer.

Mr. Becker will continue as a member of Snell's board of directors and looks forward to

working with the board and the staff on new standards development as well as other projects.

ECE R 22-06

The United Nations has enacted a revision of Regulation 22. The current version of this regulation, ECE R 22-05, sets protective performance requirements for motorcycle headgear that are deemed legally sufficient for road use in many parts of the world. The new version, ECE R 22-06, supersedes ECE R 22-05 as of January 3, 2021, and is binding on all the applying contracting bodies. Helmets meeting the current requirement may remain in production for up to three years after this date.

ECE R 22-06 draws on the requirements of a new, racing helmet standard set by the Fédération Internationale de Motocyclisme, (FIM). In effect, ECE R 22-06 folds the FIM demands into the existing R 22-05 standard. However, these additional FIM demands may pose problems for many current helmet configurations. As of last September, almost 50% of the ECE R 22-05 qualified helmets submitted for FIM testing failed to satisfy the written test criteria. Helmets certified to other standards such as Snell M2015, FMVSS 218 (DOT) or JIS T8133 may have even greater problems. Snell's directors anticipated this problem when FIM first announced their requirements and formulated M2020R to address it.

M2020R

M2020R is Snell's best estimate of what might be expected of an optimal helmet for use in FIM events or on roads where ECE regulations apply. Although the M2020R sticker will continue to warn that there are reasonably foreseeable impacts that may exceed the helmet's capability to prevent death or severe injury, M2020R will demand all the impact

management capacity reasonably possible consistent with rider needs and ECE R 22-06 demands. It is one of two options included in Snell's current M2020 program. The other, M2020D, accommodates DOT demands rather than those of ECE and FIM.

M2020R is expected to demand helmets of similar weight and bulk to those being built to M2020D and M2015. M2020R requirements are also compatible with those in DOT so that M2020R headgear might reasonably be DOT certified as well as qualified to ECE and FIM. However, M2020R certification does not assure ECE and FIM compliance; helmet makers must also consider the other demands of ECE and FIM when they develop new helmet models.

Snell welcomes questions, comments and advice regarding M2020R.

Rotational Testing

FIM FRHPhe#01 includes a rotational testing component in which a novel instrumentation package captures the test head form response and stores it for download later, after testing is complete.

Engineers and technicians at the Snell lab have been working with one of these instrumentation packages. The initial concerns mostly deal with good lab practice and whether we can obtain reliable, repeatable results. However, we are also planning to test the effects of head form treatments such as the silicon coating prescribed in FIM procedures as well as wigs, bandannas and the like. We are especially interested in investigating the effects of such innovations as Wavecel® and MIPS®.

Impact severities and injury criteria for helmet testing must still wait on definitive statements from medical and epidemiological experts.

Snell Test Methods and Equipment

An important part of the mission here is showing each helmet maker how to test to Snell standards. We want everyone to know just what their helmets are in for when they submit them to us for testing. In that way they can do the testing themselves, before they submit samples, and maybe spare themselves some disappointment. Even more important, they can run the same tests on production samples and guard against getting an ugly shock in Snell's standards enforcement testing once their helmets are certified.

Helmet makers submitting samples for testing are always welcome to come in and observe. Snell technicians will still give the samples the toughest test permitted in the standard but they'll smile while they do it and conduct a tutorial on the ins and outs of Snell testing. If you're interested, contact Steve Johnson and set up a visit.

Snell Ambassadors Program

Over 120 motorcycle riders and ridership trainers have become Snell Ambassadors working to promote motorcycle safety and proper helmet use. Ms. Hong Zhang, who supervises Snell's public outreach, recruited the first of these Snell Ambassadors at seminars held by the Motorcycle Safety Foundation, the Gold Wing Riders Association and the State Motorcycle Safety Administrators Association. Interested riders are invited to contact Ms. Zhang for more information

Online Tours and Presentations

Due to Covid-19 tours and presentations at the Snell office and lab have been suspended till further notice. However, Ms. Zhang has moved at least some of this effort online. So far, she has conducted several Zoom presentations including tours of the lab and demonstrations of helmet test procedures and they seemed to have gone over well.

Although this effort began as a pandemic measure, Ms. Zhang plans to continue these Zoom tours and presentations even after the threat of Covid subsides. It may be the best way to reach out to riders and drivers all over the United States. Please contact Ms. Zhang directly for more information.

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