

# Focus on IFA's work

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## Low-noise circular-saw blades

### Problem

Employees at workplaces in wood, metal, plastics and stoneworking businesses are frequently exposed to high noise emissions from circular saws. The saw blades are generally responsible for the high sound pressure level generated. The sound pressure level can therefore be reduced substantially in the majority of cases by the use of low-noise circular-saw blades. Although such saw blades have been available for many years, they have on the whole seldom been employed in practice.

### Activities

A project was conducted in which the noise emitted by various types of low-noise circular-saw blades during the cutting of various materials was compared to that emitted by conventional saw blades. Different blade sizes were considered, as was for example the feed speed and the free projection of the saw blade. In addition to the laboratory measurements, comparative measurements were also conducted in the workshops of appropriate production shops.

### Results and Application

The use of low-noise saw blades permits substantial reductions in sound levels:

- up to approx. 6 dB(A) with the saw in idle mode;



Measurement of noise emissions during sawing in the semi-soundproof chamber

- up to approx. 8 dB(A) during sawing of wooden panels;
- up to approx. 12 dB(A) during sawing of squared hardwood timber;
- up to approx. 6 dB(A) during sawing of plastic extrusions.

Noise protection information LSA 01-375 (formerly BGI/GUV-I 792-150) provides users with comprehensive information on the types of saw blade available on the market, their possible areas of application, and the noise abatement that can be attained.

The intention is to promote wider acceptance for and application of low-noise saw blades and thus to make a significant contribution to noise abatement.

### Area of Application

All workshops and industrial production shops in the metal industry and in the plastics, wood and stoneworking industries.

### Additional Information

- Lärmschutz-Arbeitsblatt 01-375 „Geräuschgeminderte Sägeblätter für Holz, Kunststoff und Aluminium – Marktübersicht, Schalldruckpegel in Labor und Praxis“ (bisher: BGI/GUV-I 792-150). Hrsg.: Deutsche Gesetzliche Unfallversicherung, Berlin. Juni 2012
- Hertwig, R.: Geräuschgeminderte Sägeblätter für Holz, Kunststoff und Aluminium – Marktübersicht, Schalldruckpegel in Labor und Praxis (Kennzahl 230246). In: IFA-Handbuch Sicherheit und Gesundheitsschutz am Arbeitsplatz. Lfg. 2 – XII/2011. Hrsg.: Deutsche Gesetzliche Unfallversicherung, Berlin. 2. Auflage. Erich Schmidt, Berlin 2003 – Losebl.-Ausg.  
[www.ifa-handbuchdigital.de/230246](http://www.ifa-handbuchdigital.de/230246)

### Expert Assistance

IFA, Division 4: Ergonomics – Physical environmental factors

### Literature Requests

IFA, Central Division