

## Production and Uses of Blast Furnace Slag in Japan

(Unit: metric kilo ton)

| Fiscal Year | Slag Type        | Production | Uses  |        |                  |       |                    |        | Total  |
|-------------|------------------|------------|-------|--------|------------------|-------|--------------------|--------|--------|
|             |                  |            | Road  | Cement | Soil improvement | Civil | Concrete Aggregate | Others |        |
| 1999        | Air-Cooled       | 6,551      | 3,984 | 1,982  |                  | 406   | 193                | 360    | 6,925  |
|             | Water Granulated | 15,889     | 132   | 12,243 | 330              | 934   | 879                | 475    | 14,993 |
|             | Total            | 22,440     | 4,116 | 14,225 | 330              | 1,340 | 1,072              | 835    | 21,918 |
| 2000        | Air-Cooled       | 6,625      | 3,968 | 1,677  |                  | 702   | 225                | 361    | 6,933  |
|             | Water Granulated | 16,874     | 128   | 13,206 | 676              | 1,038 | 1,293              | 400    | 16,741 |
|             | Total            | 23,498     | 4,096 | 14,883 | 676              | 1,740 | 1,518              | 761    | 23,674 |
| 2001        | Air-Cooled       | 6,202      | 3,723 | 1,385  | 30               | 750   | 220                | 340    | 6,448  |
|             | Water Granulated | 17,095     | 177   | 13,137 | 201              | 1,144 | 1,635              | 338    | 16,632 |
|             | Total            | 23,297     | 3,900 | 14,522 | 231              | 1,894 | 1,855              | 678    | 23,080 |
| 2002        | Air-Cooled       | 5,884      | 4,130 | 888    |                  | 563   | 348                | 338    | 6,267  |
|             | Water Granulated | 18,321     | 107   | 14,048 | 339              | 1,378 | 2,105              | 274    | 18,251 |
|             | Total            | 24,205     | 4,237 | 14,936 | 339              | 1,941 | 2,453              | 612    | 24,518 |
| 2003        | Air-Cooled       | 6,041      | 4,279 | 903    | 135              | 536   | 388                | 319    | 6,559  |
|             | Water Granulated | 18,318     | 80    | 13,579 | 19               | 1,194 | 2,340              | 234    | 17,446 |
|             | Total            | 24,359     | 4,359 | 14,482 | 154              | 1,730 | 2,728              | 553    | 24,005 |
| 2004        | Air-Cooled       | 5,361      | 4,063 | 643    | 493              | 523   | 373                | 343    | 6,438  |
|             | Water Granulated | 19,072     | 102   | 14,916 | 0                | 1,268 | 2,372              | 225    | 18,883 |
|             | Total            | 24,433     | 4,165 | 15,559 | 493              | 1,791 | 2,745              | 568    | 25,321 |
| 2005        | Air-Cooled       | 4,928      | 4,060 | 602    | 0                | 144   | 395                | 338    | 5,539  |
|             | Water Granulated | 19,830     | 90    | 16,128 | 0                | 932   | 2,813              | 245    | 20,209 |
|             | Total            | 24,758     | 4,149 | 16,731 | 0                | 1,077 | 3,208              | 583    | 25,747 |
| 2006        | Air-Cooled       | 4,358      | 4,087 | 583    | 3                | 153   | 340                | 347    | 5,513  |
|             | Water Granulated | 20,411     | 150   | 16,274 | 0                | 798   | 3,148              | 225    | 20,595 |
|             | Total            | 24,769     | 4,238 | 16,857 | 3                | 951   | 3,488              | 571    | 26,109 |
| 2007        | Air-Cooled       | 4,434      | 3,698 | 360    | 34               | 136   | 266                | 345    | 4,839  |
|             | Water Granulated | 21,003     | 124   | 16,311 | 1                | 1,018 | 3,028              | 238    | 20,720 |
|             | Total            | 25,437     | 3,821 | 16,671 | 35               | 1,154 | 3,295              | 584    | 25,559 |
| 2008        | Air-Cooled       | 4,094      | 3,577 | 312    | 29               | 128   | 295                | 333    | 4,675  |
|             | Water Granulated | 18,784     | 164   | 15,638 | 110              | 1,117 | 2,390              | 196    | 19,615 |
|             | Total            | 22,877     | 3,740 | 15,950 | 139              | 1,245 | 2,686              | 529    | 24,289 |
| 2009        | Air-Cooled       | 4,124      | 3,133 | 272    | 13               | 126   | 250                | 313    | 4,107  |
|             | Water Granulated | 17,551     | 121   | 14,153 | 387              | 567   | 1,785              | 206    | 17,218 |
|             | Total            | 21,675     | 3,254 | 14,425 | 400              | 693   | 2,035              | 519    | 21,325 |
| 2010        | Air-Cooled       | 5,085      | 3,230 | 178    | 16               | 218   | 272                | 449    | 4,362  |
|             | Water Granulated | 19,839     | 138   | 15,511 | 438              | 1,207 | 1,688              | 220    | 19,202 |
|             | Total            | 24,924     | 3,368 | 15,689 | 454              | 1,426 | 1,959              | 669    | 23,564 |
| 2011        | Air-Cooled       | 4,655      | 3,795 | 295    | 148              | 192   | 292                | 454    | 5,177  |
|             | Water Granulated | 19,505     | 156   | 16,700 | 232              | 1,590 | 1,661              | 281    | 20,620 |
|             | Total            | 24,160     | 3,951 | 16,994 | 381              | 1,782 | 1,953              | 735    | 25,797 |
| 2012        | Air-Cooled       | 4,590      | 3,403 | 320    | 36               | 431   | 302                | 364    | 4,855  |
|             | Water Granulated | 20,049     | 174   | 17,898 | 29               | 959   | 1,710              | 260    | 21,030 |
|             | Total            | 24,639     | 3,577 | 18,217 | 65               | 1,390 | 2,012              | 624    | 25,885 |
| 2013        | Air-Cooled       | 4,459      | 3,435 | 313    | 79               | 120   | 329                | 348    | 4,626  |
|             | Water Granulated | 20,811     | 273   | 18,327 | 9                | 346   | 2,049              | 242    | 21,245 |
|             | Total            | 25,271     | 3,708 | 18,640 | 88               | 466   | 2,378              | 590    | 25,871 |
| 2014        | Air-Cooled       | 4,909      | 3,762 | 329    | 8                | 490   | 349                | 375    | 5,313  |
|             | Water Granulated | 20,272     | 273   | 17,959 | 2                | 299   | 1,959              | 272    | 20,764 |
|             | Total            | 25,182     | 4,036 | 18,288 | 10               | 788   | 2,308              | 647    | 26,077 |
| 2015        | Air-Cooled       | 4,376      | 3,545 | 215    | 25               | 244   | 318                | 360    | 4,707  |
|             | Water Granulated | 19,686     | 251   | 17,595 | 2                | 157   | 1,841              | 251    | 20,097 |
|             | Total            | 24,062     | 3,797 | 17,810 | 27               | 401   | 2,159              | 611    | 24,804 |
| 2016        | Air-Cooled       | 4,140      | 3,111 | 237    | 44               | 223   | 347                | 334    | 4,297  |
|             | Water Granulated | 19,261     | 233   | 17,286 | 0                | 196   | 1,583              | 302    | 19,600 |
|             | Total            | 23,401     | 3,345 | 17,523 | 44               | 420   | 1,930              | 636    | 23,897 |

Source: Nippon Slag Association