

Interactive comment on “Updated atmospheric mercury emissions from iron and steel production in China during 2000–2015” by Qingru Wu et al.

Anonymous Referee #2

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General comments:

The authors made a great effort on the estimation of Hg emission from iron and steel production (ISP) during 2010-2015 in China by using technically-based emission factor method with up-to-date parameters through national sampling and literature review, which has reduced the associated uncertainty of Hg emission from ISP. Given the updated Hg emission database, this work provides meaningful results to health-related study and is helpful to make control policy. Frankly speaking, many sections in this paper just reported the numbers but didn't provide further insight beyond those facts.

Specific comments:

My main concern is the credible of dataset. Does the “SV” in Table 1 means standard deviation value? If it does, how can the authors get SV when they just have one

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Limestone sample in Shanghai and Gansu? And in Table 2, the emissions of Hg in Hainan in 2000/2005/2010/2015 were 0.0 but it has an average annual growth rate of 26%. Is that because the emission amount of Hg in Hainan was quite low so that it doesn't show the true value when you only keep one decimal fraction? In addition to this, what is the “All ISP processes” means in Fig.4? If it means the sum of Hg emission from all processes, why the total emission of Hg (asterisk in Fig.4) in Roasting plant, Coke oven, Sinter/Pellet, Blast furnace, Oxygen and Arc far exceeding the value in All ISP processes, either in 2000 or 2015?

Given that the annual Hg emission proportion (by comparing Fig. 2 and Fig. 3) shows a decreasing trend since 2000, I'd suggest authors add the emission proportion values to Figure 3 because it will provide more insight of the impact of energy consumption and air pollution control on Hg emission.

Other specific points:

Line 323: the authors stated “. . . indicated the significance of our new inventory”, which makes me confused. Please specify what it exact means.

Line 335: the authors quoted “emissions of pollutants are required to be reduced by 15% for ISP before 2020 in China”. That is unclear to me what the pollutants really are? Does the government required to reduce all pollutants by 15% simultaneously?

Technical correction:

Line 62, 102, 152 and some other places: “filed” should be “field”.

Table 1: “NM” in Note 2 should be revised as “NS”.

Figure 1: what is the numeric “1” in the title of figure 1 used for?

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