

**MANUFACTURING PRODUCTION, AUSTRALIA  
METAL PRODUCTS  
SEPTEMBER 1990**

(Previously: Production of Metal Products, Australia)

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TABLE 1. FERROUS METALS  
('000 tonnes)

Period	Basic iron, spiegeleisen and sponge iron			Iron and steel in ingots or other primary forms(a)			Blooms and slabs			
	Original (671.01)	Seasonally adjusted(c)	Trend(d)	Original (672.40)	Seasonally adjusted(c)	Trend(d)	From continuous casting (672.03)		From rolling and forging(b)	
							Original (672.04)	Seasonally adjusted(c)	Trend(d)	Original (672.04)
1987-88	5,544	..	..	6,093	..	..	n.a.	2,660	..	..
1988-89	5,875	..	..	6,651	..	..	n.p.	2,578	..	..
1989-90	6,188	..	..	6,681	..	..	5,136	2,440	..	..
1989—										
July	528	508	502	595	562	554	460	221	220	210
August	531	518	516	586	562	560	463	222	215	213
September	546	535	529	597	570	567	462	231	218	215
October	558	539	536	592	573	570	444	236	217	211
November	521	534	535	538	554	569	414	194	203	204
December	553	538	527	590	584	564	446	200	197	194
1990—										
January	534	526	518	576	577	559	469	190	194	187
February	440	490	508	451	509	552	367	136	152	185
March	484	481	502	538	544	546	400	198	194	188
April	498	513	500	555	577	542	420	211	208	196
May	518	520	501	532	538	542	410	188	197	205
June	476	487	504	530	529	547	381	213	217	214
July	515	494	509	553	518	555	414	230	230	219
August	551	533	514	626	598	564	478	228	221	223
September	526	520	518	601	589	572	445	227	214	223
1989-90: July to Sept.	1,605	..	..	1,778	..	..	1,385	674	..	..
1990-91: July to Sept.	1,592	..	..	1,780	..	..	1,337	685	..	..

(a) Includes ingots, puddled bars, pilings, blocks or lumps and steel in the molten state. (b) From rolling and forging of iron and steel (primary mills output). (c) See Paragraph 5, Explanatory Notes. (d) See paragraph 6 to 8, Explanatory Notes.

**TABLE 2. STEEL WIRE AND WIRE PRODUCTS**  
(tonnes)

Period	Ferrous barbed wire (693.21)	Ferrous welded wire fabric(a) (693.54.55)	Nails, locks, drawing pins, etc(b) (694.10)	Steel wool (697.73)
	1987-88	n.p.	271,726	n.a.
1988-89	n.p.	314,584	n.a.	1,251
1989-90	n.p.	313,176	222,297	1,221
1987—				
September qtr	3,850	66,546		344
December qtr	3,417	69,475	Not available up to June quarter 1989	360
1988—				
March qtr	3,119	64,985		298
June qtr	n.p.	70,720		321
September qtr	n.p.	80,863		329
December qtr	2,760	82,464		314
1989—				
March qtr	n.p.	79,859		298
June qtr	n.p.	87,532		310
September qtr	n.p.	88,465	6,231	333
December qtr	n.p.	84,241	6,595	345
1990—				
March qtr	n.p.	69,046	4,417	237
June qtr	n.p.	71,424	15,054	306
September qtr	n.p.	68,119	5,481	308

(a) Includes welded reinforcing steel mesh. (b) Includes staples (except in strips for office, upholstery or packaging), spiked clamps, rods and spikes. Excludes with heads of copper.

**TABLE 3. IRON AND STEEL PIPES AND TUBES**  
(tonnes)

Period	Tubes, pipes and hollow profiles, of iron and steel			Tube or pipe fittings, of iron or steel			
	Other			Cast Iron		Cast Steel (679.58)	Other (679.61)
	Cast Iron (679.11)	Seamless (679.18)	Other (679.62)	Non- malleable (679.51)	Malleable (679.57)		
1989-90	79,936	9	n.p.	10,523	n.p.	50	n.p.
1989—							
July	6,875	—	n.p.	862	n.p.	1	n.p.
August	n.p.	1	n.p.	964	n.p.	5	n.p.
September	n.p.	—	n.p.	815	n.p.	3	n.p.
October	n.p.	—	n.p.	889	n.p.	3	n.p.
November	8,241	—	n.p.	994	n.p.	4	n.p.
December	5,185	6	n.p.	669	n.p.	5	n.p.
1990—							
January	2,702	—	n.p.	675	n.p.	1	n.p.
February	6,347	—	n.p.	841	n.p.	5	n.p.
March	6,673	2	n.p.	959	n.p.	6	n.p.
April	4,858	—	n.p.	802	n.p.	6	n.p.
May	8,956	—	n.p.	1,082	n.p.	6	n.p.
June	6,838	—	n.p.	971	n.p.	5	n.p.
July	8,548	—	n.p.	945	n.p.	4	n.p.
August	6,370	—	n.p.	789	n.p.	4	98
September	6,292	—	n.p.	659	n.p.	4	n.p.
1989-90: July to Sept.	n.p.	1	n.p.	2,641	n.p.	9	n.p.
1990-91: July to Sept.	21,210	—	n.p.	2,393	n.p.	12	n.p.

TABLE 4. NON-FERROUS ROLLED, EXTRUDED AND DRAWN PRODUCTS  
(tonnes)

Period	Copper and alloy							Lead and alloy(d) (685.23)	
	Aluminium and alloy			Bars, rods sections		Wire rod and profiles (682.37)	Wire(c) (682.43)		Other (682.90)
	Bars, rods and profiles(a) (684.21)	Foil(b) (684.24)	Other (684.28)	Brass (682.36)	Other (682.35)				
1987-88	96,421	15,968	n.a.	21,313	5,012	n.a.	42,291	n.a.	n.a.
1988-89	103,406	15,603	n.a.	23,511	4,378	n.a.	42,757	n.a.	n.a.
1989-90	92,069	n.p.	176,782		r101,050		r23,733	n.p.	5,290
1989—					r		r		
July	8,845	1,237	12,237		7,984		2,327	n.p.	1,094
August	9,618	1,315	18,042		n.p.		2,341	n.p.	439
September	8,270	1,146	16,513		n.p.		2,139	n.p.	393
October	8,308	1,326	15,573		n.p.		1,379	n.p.	316
November	9,194	n.p.	21,550		9,670		1,707	n.p.	401
December	6,820	n.p.	13,716		8,100		2,193	n.p.	346
1990—					r		r		
January	4,576	n.p.	9,480		4,011		550	n.p.	290
February	7,945	n.p.	9,814		10,100		2,054	n.p.	351
March	8,093	n.p.	13,476		12,245		2,739	n.p.	455
April	6,660	n.p.	14,788		7,982		2,257	n.p.	349
May	7,759	n.p.	15,789		8,559		2,101	n.p.	506
June	5,981	n.p.	15,804		8,323		1,944	n.p.	350
July	6,952	n.p.	12,295	1,742	n.p.	n.p.	1,886	n.p.	376
August	7,299	1,333	17,636	1,717	n.p.	n.p.	2,087	n.p.	388
September	6,613	n.p.	17,792	1,458	n.p.	n.p.	1,879	n.p.	289
1989-90: July to Sept.	26,733	3,698	46,792	n.a.	n.p.	n.a.	6,809	n.p.	1,926
1990-91: July to Sept.	20,864	n.p.	47,723	4,917	n.p.	n.p.	5,852	n.p.	1,053

(a) Includes wire rod. Excludes profile decking and cladding prior to July 1989. (b) Of a thickness (excluding any becking) not exceeding 0.20mm. (c) Excludes if stranded, braided or insulated. Excludes of brass prior to July 1989. (d) Includes tin-coated lead. Excludes foil.

TABLE 5. NON-FERROUS REFINED METALS(a)

Period	Precious metals(c)					
	Copper	Lead(b)	Tin	Zinc	Silver	Gold
	'000 tonnes	'000 tonnes	tonnes	'000 tonnes	kg	kg
1987-88	186	182	501	306	304,426	111,934
1988-89	211	184	377	303	305,013	169,653
1989-90	245	197	381	295	368,378	233,301
1989—						
July	18.9	14.1	49	23.1	23,769	16,926
August	21.3	20.6	30	22.3	22,145	19,764
September	19.3	17.7	46	25.2	32,196	19,766
October	21.8	18.8	54	27.4	23,408	18,779
November	23.1	16.6	32	25.2	32,300	19,881
December	18.9	16.9	31	24.6	32,759	19,462
1990—						
January	20.5	4.0	18	26.9	12,368	19,404
February	19.5	12.4	28	23.2	26,780	18,422
March	19.0	20.3	28	24.7	37,653	19,897
April	18.5	18.2	17	19.8	41,171	17,678
May	23.6	19.8	22	25.7	45,286	23,468
June	20.4	17.8	26	26.6	38,543	19,854
July	20.5	r23.6	25	28.2		
August	20.9	17.7	22	28.0		
September	20.5	18.2	42	25.7	97,488	54,770
1989-90: July to Sept.	59.5	52.4	125	70.6	78,110	56,456
1990-91: July to Sept.	61.9	59.5	89	81.9	97,488	54,770

(a) Primary origin only. Comprises production by establishments classified to either the Manufacturing or Mining Sectors. Source: Australian Bureau of Agricultural and Resource Economics. (b) Includes lead content of lead alloys from primary sources but excludes lead-silver bullion. (c) Collected on a quarterly basis from July 1990.

## EXPLANATORY NOTES

## Introduction

This publication, is one of a series of ten containing monthly and quarterly production statistics. The titles of other publications of this series are shown in paragraph 9.

## Classification

2. Data contained in these publications are mostly based on monthly or quarterly collections conducted by the Australia Bureau of Statistics (ABS). Most items are identified by the commodity codes used in the Australian Standard Commodity Classification (ASCC), which was developed by the ABS to facilitate greater comparability of manufacturing production commodity statistics with import and export commodity statistics. In cases where data are derived from sources other than ABS collections no commodity code is shown and the source of the data is acknowledged in a footnote.

## Scope and coverage

3. Manufacturing commodity statistics collected by the ABS exclude details relating to single establishment manufacturing enterprises with fewer than four persons employed and production of establishments predominantly engaged in non-manufacturing activities but which may carry on, in a minor way, some manufacturing. However, except for a few commodities the effect on production levels and movements is marginal.

4. Annual figures shown in this publication are derived by aggregating monthly/quarterly production and relate to production during the year ended 30 June. They may differ from annual manufacturing census data which relate to the census year and, in the case of businesses unable to report on a June year basis, include details in respect of substitute accounting periods.

## Seasonal adjustment and trend estimates

5. This publication contains seasonally adjusted statistics of several items. In the seasonal adjustment, account has been taken not only of normal seasonal factors but also, where appropriate, of 'working-day' effects (arising from the varying numbers of Sundays, Mondays, Tuesdays etc. in the month) and the influence of Easter and Australia Day which may, in successive years, affect figures for different months. However, care should be exercised in interpreting the figures for those months in which Christmas/New Year and Easter holidays fall as some manufacturers vary holiday shutdowns in the light of prevailing demand for their products. Details of the methods used in seasonally adjusting these and other series are available on request.

6. The smoothing of seasonally adjusted series to create trend estimates is a means of reducing the impact of the irregular component of the series. The trend estimates have been derived by applying a 13-term Henderson weighted moving average to the seasonally adjusted series.

7. While this smoothing technique enables estimates of trend to be produced for the latest month, it does result in revisions to the estimates for the most recent months as data for subsequent months become available. Generally subsequent revisions become smaller and after 3 months have little impact on the series. There will also be

revisions as a result of revisions to the original estimates and annual reviews of seasonal and 'working day' factors.

8. Users may wish to refer to the ABS Information Papers *A Guide to Smoothing Time Series — Estimates of Trend* (1316.0) and *Time Series Decomposition — An Overview* (1317.0) for more detailed information on smoothing of seasonally adjusted time series data.

## Related publications

9. Other ABS publications which may be of interest are:

*Manufacturing Production, Australia, Preliminary* (8301.0) — issued monthly

*Manufacturing Production, Australia, Household Appliances and Electrical Equipment* (8357.0) — issued monthly

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*Manufacturing Commodities : Selected Principal Articles Produced, Australia 1986-87, Preliminary* (8365.0)

*Manufacturing Commodities : Principal Articles Produced, Australia 1986-87, (8303.0).*

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## Symbols and other usages

- n.p. not available for separate publication (but included in totals where applicable)
- n.a. not available
- n.y.a. not yet available
- .. not applicable
- r revised since last issue

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